The Journal

OF THE

AMERICAN ASSOCIATION OF NURSE ANESTHETISTS

AUGUST 1946

VOLUME XIV NUMBER THREE

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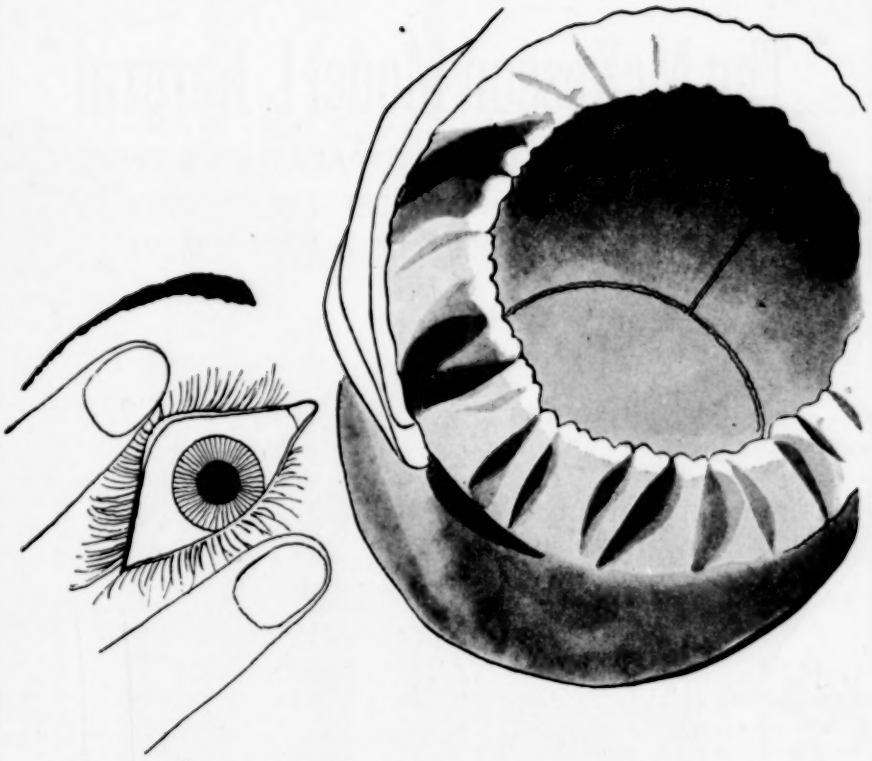

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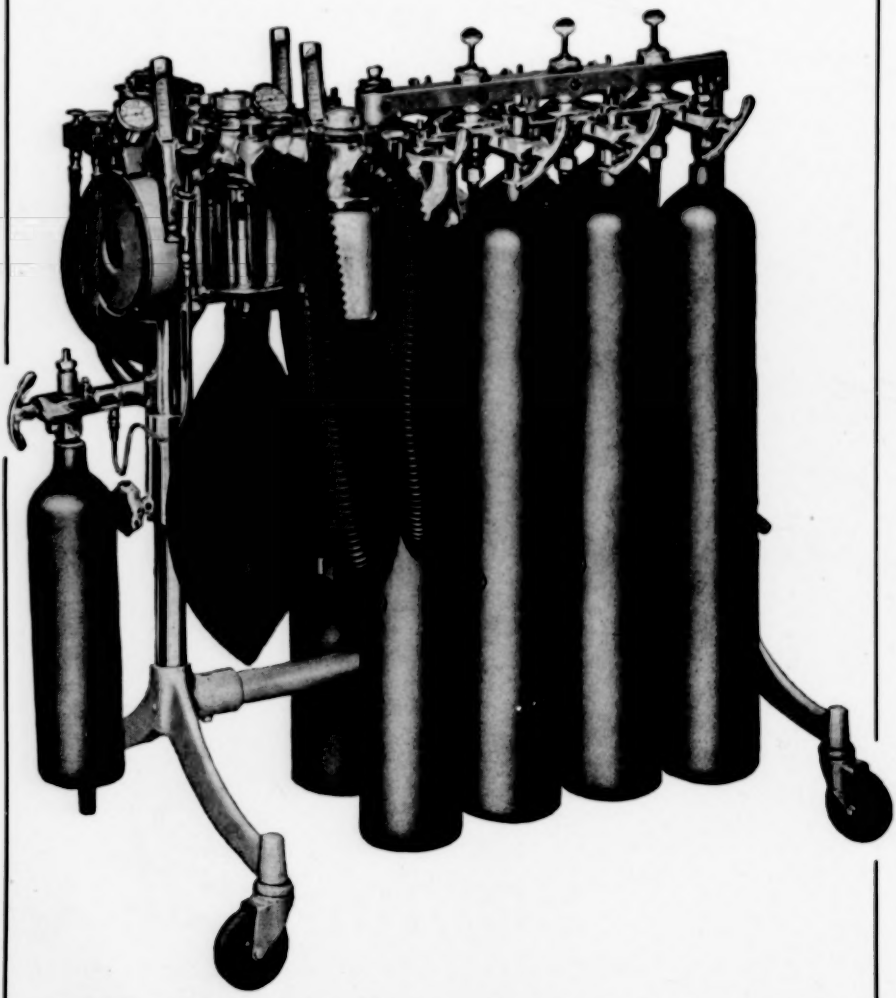

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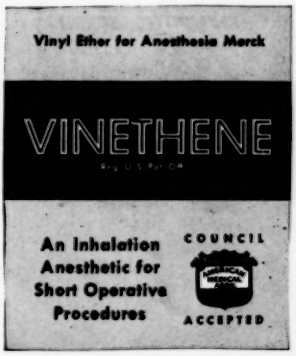

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Premedication: Its Advantages and Disadvantages in General Surgery

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Many modern improvements in surgical procedures are due, in part, to advances made in the practice of anesthesia. Improvements in anesthetic technic not only have diminished the hazards of operation, but also have minimized the terror and discomfort of the patient. Not many years ago, the only premedicant was a vigorous purgative. After a restless night, the patient was brought to the operating room in an agitated frame of mind, making administration of an anesthetic difficult because of the nervousness of the patient. As a result, the surgeon, also, was hampered. Fortunately, this situation has changed materially.

The student and trained anesthetist alike should not overlook the benefits to be derived from a well-planned order of premedication. It might be said that anesthesia is the summation of the premedication plus an anesthetic.

Patients, whether healthy, or ill and feeble, display different reactions to doses of premedicants at various times. It has been pointed out that anything which increases the basal metabolic rate of a patient (as expressed by oxygen consumption) increases his reflex irritability and makes him more resistant to anesthetics. Pain, fear, and excitement also increase reflex irritability and, thus, increase resistance to anesthetics. The use of adequate and proper premedication spares the patient much mental anxiety, shortens the induction of anesthesia, and diminishes the amount of anesthetic agent actually required.

Psychologic Premedication: A patient usually is in an abnormal state of mind before an operation. Many anesthetists take operations for granted; however, for the patient, it is a big moment in his life. Many patients fear the anesthesia, particularly certain types of anesthetic procedures. If possible, it is wise to visit the patient in his room. This is particularly true if the use of local or regional anesthesia is contemplated. In case the patient is first seen in the operating room, the anesthetist should take a minute to become acquainted with him. The anesthetist should remove his facemask and go to the side of the table where the patient can see him without straining his eyes and looking up over his forehead. The anesthetist should smile at the patient, talk quietly, ask some unimportant question, possibly hold the patient's hand, and assure him in a most convincing manner that he will receive the

Read at the Tri-State Nurse Anesthetists Assembly, May 1946, Chicago, Ill.

best of care. Some anesthetists might be considered hypnotists because they are able to gain the patient's confidence immediately. This makes the patient more co-operative. Classify such administrators as you like—they do make good anesthetists.

Sedative Drugs: The sedative drugs used for preanesthetic medication exert a beneficial effect by counteracting the factors which increase reflex irritability. These drugs may range from an analgesic, such as acetylsalicylic acid, to a basal anesthetic. Different sedatives have different characteristics and display widely different actions. For example, short-acting barbiturates allay fear and produce sleep, but do not have a specific action against pain, whereas opium derivatives offset pain before they produce sleep. These differences are due to selective action on different parts of the brain. If the barbiturates are used alone, sedation will be satisfactory, but the actual amount of anesthetic required to prevent the perception of pain will be about the same as that required when premedication is not used. The addition of an opium derivative tends to decrease the amount of the anesthetic required.

Because of this, it is well to administer a barbiturate as a sedative the night before operation because it will assure the patient of a night's rest. This also holds true for children. Advantage frequently is taken of children because they cannot defend themselves. Too little attention is paid to their first night in the hospital. The mental composure of a child on his way to the operating room depends on a well-planned method of premedication. Sedation is particularly important in cases in which young patients have to undergo several plastic operations.

Analgesics and Narcotics: Morphine sulfate is the most widely used of all premedicants. The dose varies from 1/12 grain (0.0054 gm.) for well-developed children and feeble adults to ¼ grain (0.016 gm.) for a husky adult. It takes at least thirty to forty-five minutes to obtain the maximal analgesic effect of a subcutaneous injection of morphine. If morphine cannot be administered subcutaneously an adequate time before the patient is to be anesthetized, it should be administered intravenously a few minutes before the induction of anesthesia is begun. The maximal effect is attained within five to fifteen minutes when the drug is administered by this route. If morphine is administered too rapidly by the intravenous route, the patient may complain of feeling very weak, or may even faint. A dose of ⅛ to ¼ grain (0.008 to 0.016 gm.) of morphine may be injected slowly into a vein. At the Mayo Clinic, we administer the morphine sulfate in this manner in cases in which rapid action of the drug is desired.

Pantopon is a mixture of pure alkaloids of opium and contains about 50 per cent morphine. When this drug is used as a premedicant, the usual dose is ⅙ to ⅓ grain (0.01 to 0.02 gm.), administered subcutaneously. If patients are sensitive to morphine, pantopon is not a satisfactory substitute.

Dilaudid hydrochloride is a good substitute for morphine but the maximal analgesic effect does not occur until ninety minutes after the drug has been administered. The usual dose is 1/32 to 1/24 grain (0.002 to 0.0027 gm.) given subcutaneously.

Demerol (1-methyl 4 phenyl piperidine 4-carboxylic acid ethyl ester hydro-

chloride) has an action similar to that of morphine and atropine, but does not cause respiratory depression as morphine does. The analgesic effect is almost the same as that of morphine; the secretion of mucus is decreased and smooth muscle is relaxed. A 100 mg. dose is about equal to a dose of ¼ grain (0.016 gm.). The action of demerol is short, that is, about two hours in duration. The drug is said to be habit-forming; consequently, it must be used carefully.

Belladonna-like Drugs: Atropine sulfate is administered to inhibit secretory activity and to offset, to some extent, the depressant effect of narcotics. It should be remembered that the maximal effect of atropine occurs one to one and a half hours after subcutaneous injection of the drug. If a more rapid effect is desired, the drug should be administered intravenously. Intravenous injection may be used if the patient is experiencing a severe laryngospasm.

Scopolamine (hyoscine) hydrobromide is used to suppress secretions and as an antispasmodic. The subcutaneous dose is 1/200 to 1/100 grain (0.00032 to 0.00065 gm.). When it is administered in combination with morphine, the ratio of morphine to scopolamine is 25:1. The maximal effect is obtained an hour and a half after administration of the drug. It is a psychic sedative and is effective in relieving emotional disturbances.

Basal Narcosis: Basal narcosis is time-consuming. It also is dangerous because it is liable to cause respiratory depression. This depression may be so severe as to necessitate resuscitative procedures. The only basal narcotic that I shall consider is avertin (tribromethanol).

At the clinic, the use of this drug is practically limited to cases in which children are to undergo bronchoscopy or removal of a foreign body from the tracheobronchial tree. The dose of avertin is 50 to 100 mg. per kilogram of body weight. The drug usually is administered rectally in the form of avertin with amylene hydrate (solution of tribromethanol) approximately half an hour before operation. Ninety-five per cent of the drug is absorbed, and the hypnotic effect lasts about 2.5 hours. The avertin is combined with glycuronic acid in the liver and is excreted in the urine, while the amylene is excreted by the kidneys and lungs unchanged. Avertin is contraindicated in diseases of the kidney or liver and in cases of colitis and enteritis. Respiratory depression must be prevented. It does not seem justifiable to use avertin if means for normal artificial respiration are not at hand.

Inhalation Anesthesia: The usual procedure is to administer a barbiturate, for example, pentobarbital sodium or seconal sodium in doses of 1½ grains (0.1 gm.) the night before operation. The dose is repeated about two hours before the expected time of the operation. Morphine sulfate and atropine sulfate should be administered about forty-five minutes before the induction of general anesthesia is begun. The full effect of the morphine and atropine should be evident before the administration of the anesthetic is begun. It is very disturbing to have the depressant effect of morphine occur after the patient has been anesthetized. If this occurs and the depressant effect is severe, artificial respiration sometimes is necessary and operation frequently should be postponed, if not already started.

Rather than administer a hypodermic injection of morphine sulfate and atropine sulfate too short a time before induction of general anesthesia, I prefer to administer the premedicant slowly by the intravenous route.

Intravenous Anesthesia: In cases in which intravenous anesthesia is to be used, a barbiturate should be administered as described previously, and morphine and atropine should be administered forty-five minutes before the injection of the anesthetic is begun. The dose of morphine should be small, as morphine and pentothal sodium seem to be synergists.

Spinal, Local, and Regional Anesthesia: In cases in which spinal, local, or regional anesthesia is to be used, the plan of premedication is much the same as that which has been outlined. The barbiturates also are important in counteracting toxic manifestations of the local anesthetic drugs. Additional doses of morphine, particularly if administered intravenously, deaden painful stimuli when the anesthetic agent is losing its effect.

Ambulatory patients, particularly if traveling alone, should not receive a barbiturate, but may be given small doses of morphine sulfate intravenously. In cases of emergency operation, morphine and atropine may be administered intravenously. Frequently, the patients are in shock. If shock is present, morphine sulfate and atropine will not be picked up readily by the circulation; consequently, repeated subcutaneous injection of sedatives must be guarded against, or the patients should be watched closely. A better plan is to administer the sedative intravenously.

Thoracic Surgery: In cases in which operations are to be performed on the thorax, care should be taken to insure that premedication does not cause respiratory depression. It is not advisable to abolish the cough reflex. The combination of large doses of morphine sulfate, barbiturates, and anesthetic may hinder the awakening process and allow tracheobronchial secretions to collect.

Obstetric Procedures: In obstetric cases, a sedative should not be administered within two hours of the expected time of delivery. Respiratory depression of a newborn infant frequently is due to the administration of morphine sulfate, or a barbiturate, too late in the course of labor. It seems preferable to use only atropine, if surgical procedure such as cesarean section is necessary.

Neurosurgical Procedures: In operations on the brain, patients seem to do better without too much sedation. If, in addition to the administration of a general anesthetic, a patient has received a subcutaneous injection of morphine sulfate, the length of time required for him to awaken from his anesthetic may be unduly prolonged, and because of this, it might be difficult to evaluate the true condition of the patient.

Summary

The advantages of premedication are as follows: (1) it insures adequate sleep and rest the night before the operation; (2) it lessens the secretion of mucus; (3) morphine appears to decrease the amount of the anesthetic, and (4) a barbiturate allays fear. Premedication also has the following disadvantages: (1) barbiturates occasionally cause stimulation; (2) some patients are sensitive to morphine; (3) premedication may cause severe respiratory depression, and (4) premedication may prolong the duration of anesthesia unduly.

Anesthesia in Orthopedic Surgery

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Attending Orthopedic Surgeon to St. Joseph's, Methodist, and City-County Hospitals, Fort Worth, Texas

Ever since the advent of anesthesia, we have been constantly striving and searching for the perfect anesthetic. As yet, it has not been found, but in this quest we have found an imposing variety of anesthetic agents and techniques which, when properly chosen in indicated cases, tend to approach the ideal in each instance. It becomes readily apparent then, that to get the best results in anesthesia, each case should be considered individually, and the indications and contra-indications for different methods of anesthesia carefully considered before making a decision. It is also apparent that the problems in anesthesia confronting the surgeon and anesthetist vary widely in the different branches of surgery.

The scope of this paper is to outline the anesthetic agents used in orthopedic surgery. In preparing it, I have relied primarily on personal experiences and observations, and have deliberately avoided statistical analyses and reports of other workers. Misleading deductions from statistics are common, and since anesthesia is, largely, an individualized science, methods and agents which work excellently in the hands of one man may yield unsatisfactory, or even disastrous results when used by another.

Read at the 10th annual meeting of the Texas Association of Nurse Anesthetists, March 1946, Fort Worth, Texas.

THE ANESTHETIC AGENTS IN ORTHOPEDICS

Ether is the old, important pillar of the field. It furnishes excellent anesthesia for orthopedic work in most regions of the body. It is especially useful in the treatment of compound fractures because it has less tendency to lower blood pressure than many other types of anesthesia. Since many such patients come to the hospital in shock, or are only recently recovered from shock when operated upon, this is an important consideration. The low explosive index of open drop ether is also a considerable factor when it is necessary to take X-rays in the operating

room, and especially when the X-ray equipment is not of the most modern shock-proof type.

Induction for ether anesthesia with nitrous oxide, by use of a regular anesthesia machine, is common. Undoubtedly, however, many of you are called upon to produce anesthesias where such a procedure is not available. For these cases, induction with sodium pentothal followed by open drop ether furnishes a safe, smooth, satisfactory anesthetic without the use of cumbersome apparatus. Another method, which is frowned on by some anesthetists, but which has been widely used at the Los Angeles County Hospital, is ethyl chloride induction. In that large institution, it was frequently necessary to give anesthetics away from the operating rooms, remote from the anesthetic machines. The anesthetist supplied with a tube of ethyl chloride, a mask, and a can of ether, could give a smooth anesthetic anywhere. The patient was asked to count while getting ethyl chloride, and as soon as counting ceased, administration gradually switched to ether. By continuing a few drops of ethyl chloride after counting ceased, the excitement phase was reduced to a minimum. This procedure was used in a very large number of cases with no unfavorable results attributable to ethyl chloride.

Of course, ether has the danger of any inhaled, mucosa-irritating agent—that of postoperative pneumonia. In addition, there is a high incidence of postanesthetic nausea. For this reason, we frequently do not use ether in emergency cases, because of recently ingested food.

Cyclopropane has become popular because it offers many of the advantages and avoids some of the disadvantages of ether. Its use in orthopedics is limited in many instances because of the increased risk of explosion when X-rays are taken in the operating room. My own experience with cyclopropane as the full anesthetic medium has been rather limited, but it is used frequently to supplement avertin anesthesia.

Avertin is widely used in orthopedic cases here in Ft. Worth. Few complications have been encountered in a large series of cases. It is ideally suited to many orthopedic procedures. By giving the avertin in the patient's room prior to transportation to surgery, it eliminates apprehension and nervousness during the journey to the operating room. In bone and joint surgery, it is frequently necessary to perform more than one operation to correct a condition. In cases requiring multiple operations, when such an agent as ether is used, some patients develop as much apprehension over the discomforts of induction and prospective postanesthesia nausea as for the operation itself. This is almost completely eliminated with avertin. By inducing anesthesia in the patient's room, it is possible to remove or change traction, and transport patients with fractured limbs to the operating room without discomfort to the patient. Further, avertin is preferable to inhalation anesthesia in prolonged procedures, for elderly patients, and in situations where it is necessary to manipulate the patient in such a way that the administration of inhalation anesthetics is technically difficult—as in the reduction of fractured vertebrae.

The usual premedication for avertin has been a cleansing enema the night before surgery; nembutal, the night before and morning of surgery; and morphine and atropine shortly before ad-

ministering the rectal anesthetic. We usually employ avertin as a full anesthetic, rather than as just a basal, and for that reason, larger doses are used. The dosage for the average healthy adult is 90-100 mgm. per kilogram of body weight. The anesthetic is well tolerated by elderly patients, as in cases of fractured hips, but smaller doses ranging from 70-80 mgm. are given.

It is occasionally necessary to supplement the avertin with cyclopropane during a painful part of an operation, such as making the skin incision, but the patient usually can be carried through most of the procedure without additional anesthesia. If the patient shows too much depression of respiration, oxygen and carbon dioxide are given. Following the operation, the patient is given 2cc. of metrazol intravenously and 1cc. intramuscularly every hour until he reacts.

Intravenous sodium pentothal is another exceptionally useful general anesthetic in orthopedics. Because of rapid induction and recovery, it is quite suitable for short procedures, such as the reduction of Colles' or Pott's fractures. Recently, we have employed continuous gravity or drip method in longer procedures with very satisfactory results. A 1 per cent solution is employed rather than the usual 2½ per cent, and this lends greater safety to the method while facilitating proper maintenance of the depth of anesthesia. Because of the low incidence of nausea and vomiting, this is especially suitable for emergency patients who have eaten shortly before their injury. In this connection, however, it must be pointed out that the use of pentothal is dangerous to patients bordering on shock. With this method, it is preferable to premedicate the patients with morphine and atropine 20-30 minutes before administering the anesthetic, and metrazol should be kept handy in case of respiratory depression. If the patient does not show signs of rapid recovery on completion of the anesthesia, 1-2 cc. of metrazol are given intravenously. As mentioned before, pentothal also works well and is used frequently as an induction agent for ether anesthesia.

Novocaine also has a wide variety of uses in orthopedic surgery. Spinal anesthesia is very useful in operations and fracture reductions in the lower extremities. Unfortunately, it is contraindicated in many emergency cases because of shock, and it is dangerous for elderly patients. In using a spinal anesthetic, it is preferable, whenever possible, to administer the anesthetic with the involved leg downward. This insures maximum anesthesia in the involved leg.

Brachial Block anesthesia is occasionally used for upper extremity surgery, but it is not nearly as dependable as other anesthetic agents. Since the advent of pentothal and avertin, it is used with diminishing frequency.

Local Anesthesia in the treatment of fractures is a very effective agent, often overlooked. It is especially useful in fractures about the wrist, ankle, clavicle, and fingers, but is also helpful in many other places. Five or 10 cc. of a 1-2 per cent solution of novocane are injected into the hematoma at the fracture site, and after five minutes adequate anesthesia is obtained for reduction. With reasonable asepsis there is no danger of introducing infection into the fracture site. Of course, the primary contraindication to this method of anesthesia is the juvenile or excited patient.

It requires cooperation on the patient's part, so the hysterical patient had best have a general anesthetic.

Curare is not an anesthetic agent and is useful in anesthesiology only by reason of its ability to produce complete muscular relaxation. Its principal value lies in the fact that, through its property of effecting muscular relaxation, it is possible to employ advantageously both potent and toxic anesthetic agents in low concentrations as well as less potent but safer agents. The employment of curare as a safe and useful drug became possible through the efforts of four men: Richard Gill, who brought it out of the jungles and prompted its adaptation to clinical practice; Bennett, who popularized its use during shock therapy; McIntyre, who studied its pharmacological actions; and Griffith who introduced it into the clinical practice of anesthesiology. Consistent results have been made feasible by the efforts of the men in the Squibb Laboratories who have prepared a stable and standard product which is marketed under the trade name of Intocostrin.

Sustentative evidence gives credence to the theory that the basic action of curare is its ability to minimize or prevent response to acetylcholine. Curare is apparently capable, then, of influencing any structure whose function depends on mediation of nerve impulses by acetylcholine. This concept is helpful in comprehending the effect of the agent on organs enervated by either the somatic or autonomic nervous systems. The effect of the drug is directly proportional to its concentration at the site of action. The action is reversible and can be accomplished by increasing the concentration, or length of action, of acetylcholine. This increase in concentration, or prolongation of action, of acetylcholine can be produced by strengthening the nerve impulse, adding acetylcholine artificially, or inhibiting the action of cholinesterase with drugs such as physostigmine or prostigmine. The latter method is the most convenient means of overcoming excessive curarization in clinical practice. There is some evidence that curare may kill by depressing the peripheral circulation, but the majority of deaths from curare are due to asphyxia accompanying unrelieved respiratory paralysis. There is also some evidence that curare may precipitate bronchospasm. The bronchospasm occurs at the termination of the anesthetic procedure and is often associated with the use of prostigmine. It is difficult to rule out the part played by prostigmin in the development of the bronchospasm and this drug should be used with caution. If bronchospasm does appear, artificial ventilation with oxygen, intravenous atropine in large doses, and more curare may be useful.

The coveted action of curare in clinical practice is that degree of depression of muscular activity which provides suitable relaxation at the site of operation without undue paralysis of the muscles of respiration or prostration of the peripheral circulation. Fortunately, this optimal state can be achieved by judicious use of the drug. The frequency of its attainment is directly proportional to the experience of the employer. Muscular paralysis is achieved by preventing the receptor substance of the muscle from responding to acetylcholine. The muscle cells are unaffected and may be stimulated to full action, in the presence of curarization, by electrical means. The nerve leading to the muscle is likewise unaffected by the

curare.

Experimental and clinical data seem to indicate that curare has no direct or indirect effect on the heart. The drug has been used on patients with and without cardiac abnormalities, and in the presence of agents prone to produce arrhythmias, and no alterations attributable to curare can be segregated. Peripheral circulatory depression, however, does develop in a few patients in whom curarization is present.

Reduction in blood pressure may be due to a direct relaxing effect on the smooth muscle of the arterioles, or to widespread muscle relaxation with consequent impaired venous return and lowered cardiac output. It is associated with either excessive single doses, administered in a short time, or to rather complete curarization over long periods of time, such as is necessary in the treatment of tetanus with this drug. The circulatory detrusion is usually of brief duration and recovery occurs without specific therapy. In patients with labile vascular systems, it may be profound and refractory to treatment. In the latter type of case, it might be possible to precipitate a fatal termination of the anesthetic procedure. It is important, for this reason, to use curare cautiously and avoid large single doses or protracted curarization.

IN THE DAILY NEWS—anesthesia has popular appeal. A three-page feature on "Ice Anesthesia," for instance, appeared in a recent issue of "Life" Magazine. It was illustrated with photographs showing a patient in the several stages of ice anesthesia preparatory to undergoing amputation of his upper leg. Quoting from the article: "Instead of resorting to ordinary methods, doctors packed the leg in ice. Within three hours, tissue metabolism was reduced to a minimum by the cold and its nerves were deadened. Pain, spread of infection, production and absorption of poisons were halted. Freed from discomfort and fever, the patient regained the strength to undergo amputation . . . after seven days on ice, the leg was amputated. Cold had so numbed the leg that no other anesthetic was needed. The patient suffered no pain nor shock and recovered nicely from his surgical ordeal. . . . Refrigeration is also being used to avoid many amputations entirely. By slowing down local tissue reactions in a limb damaged by accident or disease it often gives the body a chance to make its own repairs through natural healing processes."

Likewise, "truth shots" have been receiving attention in the daily press in connection with crime detection. One news article in the "Chicago Daily News" recently reported: "Sodium petothal . . . has been used by crime laboratories for about ten years . . . originally it was discovered by the Abbott Laboratories of Chicago for use as an anesthetic in surgery. . . . Psychiatrists have found it effective in dulling the conscious without affecting the sub-conscious. They use it to probe patients minds for deeply hidden incidents that may have been the root of mental or physical disturbances."

Endotracheal Anesthesia

KATIE PACE
Harris Clinic
Fort Worth, Texas

The endotracheal method of anesthesia has become one of the most valuable methods for increasing the number of cases in which the use of inhalation anesthetic agents is satisfactory.

As early as the seventeenth century, experimental work was done on animals to develop a method of sustaining life during temporary periods when normal respiration had been suspended, either by reason of mechanical stoppage of the respiratory function, or as a result of failure of the respiratory center. Robert Hook, at this early date, demonstrated a method consisting of blowing a continuous stream of fresh air through the mouth, trachea, and lungs of a dog, the dog's chest having been previously pierced to afford escape for the air blown into the respiratory tract.

Further development of this principle lay dormant for some two centuries. However, in 1900, Nagel sustained life for two hours in pigeons, which had been previously curarized to cessation of respiratory function, by blowing a stream of air through the pigeon's humerus into its air sacs.

Nagel and Hook demonstrated the fact that thoracic and abdominal respiratory movements are not necessary to effect respiration, but that instead, respiration consists essentially of gaseous exchange in the pulmonary area, whether those gases are brought to that area by usual respiratory movements or by mechanical means.

Meltzer and Auer, in 1909, were first to apply this principle as a means of promoting artificial respiration. These progressive researchers promptly recognized the possibility of delivering anesthetic gases to the pulmonary region by insufflation. Their co-worker, Elsberg, was the first to anesthetize human patients for surgery by this method.

As early as 1920, Magill used endotracheal anesthesia experimentally. A current modern technique was inaugurated by Guedel and Waters in 1928 and Helen Lamb introduced the endotracheal inhalation method of anesthesia at Barnes Hospital, St. Louis, Missouri, in 1930.

Read at the 10th annual meeting of the Texas Association of Nurse Anesthetists, March 1946, Fort Worth, Texas.

Two schools of thought regarding endotracheal technic developed in the United States. One group favored direct oral intubation, while the other group preferred the blind method. McKesson and Clement became exponents of the blind technic, while Ralph M. Waters favored the oral method.

The impression is inescapable that skill in direct oral intubation is probably developed more generally than skill in blind nasal intubation. The outstanding advantage of the blind method is the amazing ease and simplicity of intubation. This is especially a major consideration in military anesthesia. Essentials of anesthetic equipment, as judged by civilian standards, may not always be available in the field. The shorter time required for intubation is an important consideration.

More than considerable practice seems necessary to become adept in this method. There are instances in which cases with bilateral nasal deformities are encountered. Nasal bleeding is another complication. Upper respiratory infection constitutes another contraindication to blind intubation, as does laryngeal disease.

To aid in preventing nasal hemorrhage caused by trauma, the catheter should be small enough to pass through the nasal passage easily, without forceful manipulation. Gentleness in passing the tube is absolutely imperative. The direction of progress of the tube must follow the anatomical floor of the nose.

Successful blind intubation depends upon the exact control of four factors at the critical moment of intubation. These factors are:

First, *timing*—This favorable condition exists in the upper level, first plane of third-stage anesthesia. Blind intubation is easiest before relaxation occurs because the tonus of the neck muscles draws the epiglottis forward out of line with the glottic opening.

Hypernea is the second factor essential to success. During exaggerated breathing, the glottic opening is at its maximum diameter as expiration occurs.

Third, the phase of the respiratory cycle most favorable for passing the catheter is *expiration*. The protective laryngeal reflex is less active during expiration than during inspiration.

Fourth, proper *position* of patient's head.

When an attempt to place the tube blindly has not been successful, oral intubation should be resorted to at once. A full surgical stage of narcosis is more desirable in oral intubation. The head is extended, preferably by an assistant; the upper teeth should not be used as a fulcrum and should be protected from damage by the laryngoscope. All dentures should be removed. The patient's lower lip is rolled back so as to avoid pinching and bruising with blade. The tongue should be pushed to the left and lie behind the laryngoscope blade so that it does not interfere with the anesthetist's vision. Pressure of the laryngoscope should always be directed upward. After insertion of the laryngoscope and the epiglottis is visualized, the tip of the blade is depressed enough to pick up the epiglottis and press it against the base of the tongue, thus leaving the glottis exposed to view. The endotracheal catheter is then inserted upon inspiration, connection made to gas machine, and anesthetic technique carried out in the usual manner.

Labored respiration is unsatisfactory from the standpoint of both anesthetist and surgeon. During abdominal operations, movement of viscera, abdominal wall, and diaphragm, which may interfere with the accomplishment of operative procedures, can cause an operative accident because the operative target is in motion. A labored or a straining type of respiration usually increases bleeding from open vessels. Labored respiration may occur as a result of dyspnea owing to respiratory obstruction, or to lack of oxygen and an accumulation of carbon dioxide. Deep respiration may be caused by pain stimuli or posture. Respiratory embarrassment may be caused by some physical handicap which limits the vital capacity, or the motion of respiratory muscles. If the patient's respirations can be made placid and adequate without the use of an overdose of anesthetic agent, the appearance of cyanosis, evidence of oxygen want, or the excessive accumulation of carbon dioxide, the conditions become relatively satisfactory to the surgeon and anesthetist. This condition can easily be accomplished by use of the endotracheal catheter.

The endotracheal tube has a special advantage for operations on the brain. During these operations, it is necessary to have the anesthetist and anesthetic equipment out of the operative field. This method of anesthesia enables the anesthetist to maintain quiet unlabored respirations, stable blood pressure and pulse rate, for the safety of the patient. Artificial respiration, often necessary in surgery of the cerebellum, may be instituted instantly without hindering the surgeon.

The endotracheal tube is also valuable for patients who are to have intrathoracic operations when means must be available to control intrathoracic pressure. In the course of certain operative procedures for mediastinal tumors and during most intrathoracic operations, it is necessary to expand a lung that has been collapsed to make room for operative procedures. The tube is important for operations on the face, neck, throat, and eyes. In operations on the thyroid gland and especially recurrent thyroids, when the trachea is compressed before surgery, it is invaluable. It is also important in operations on the stomach since pyloric obstruction may result in regurgitation of gastric contents into the throat with aspiration into the trachea. This danger can be minimized or eliminated by use of a well-fitting catheter with an inflatable cuff. In any type of surgery in which the occasion may arise to aspirate material from the lung, a suction catheter may be easily used through the endotracheal tube. Endotracheal anesthesia is ideal for the patient undergoing back surgery, as in spinal fusion.

For operations on the large bowel, use of an endotracheal catheter is desirable in maintaining smooth anesthesia. For operations associated with a considerable loss of blood, as in a certain percentage of cases, such as spleenectomy or radical amputation of the breast, the endotracheal tube has proved an asset.

In my personal experience, I have found endotracheal anesthesia an extremely valuable procedure; especially in abdominal surgery, such as cholecystectomies, intestinal obstructions, gastric resections, ruptured peptic ulcers, hysterectomies, and colon surgery. Tonsillectomies, thyroidectomies, mastoidectomies, and plastic surgery of any

kind about the face, neck, and head are accomplished with much greater ease, assurance, and safety for the patient, surgeon, and anesthetist with the use of the endotracheal tube. The danger of aspiration of blood into the trachea is eliminated, a patent airway is established, artificial respiration may be instituted instantly, and all anesthetic equipment and the anesthetist are removed from the operative field.

Sodium pentothal should not be administered without having immediately available a laryngoscope and endotracheal catheter, because of the danger of laryngeal spasm.

Endotracheal anesthesia facilitates the use of a minimum of anesthetic agents and permits suctioning out of the trachea any accumulated mucus or secretion, thus lessening the danger of postoperative pulmonary complications. Because its very potent properties have a respiratory depressant effect, even to respiratory paralysis, it is well to be ready to intubate when administering curare.

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Curare and the Anesthetics

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The action of curare on the gut has been studied. The small intestine consistently exhibits brief cessation of peristalsis and somewhat longer periods of loss of tone with therapeutic amounts of the drug in the unanesthetized animal. The cessation of peristalsis lasted, usually, only two to three minutes. In a few animals, it lasted approximately twenty minutes. The loss of tone persisted for about twenty minutes with a gradual return to normal. Morphine and cyclopropane obliterated the curare effect.

The effect of curare on the stomach was inconclusive. The cause of cessation of peristalsis and loss of tone produced by the curare may be one or the other or a combination of two factors. The drug was shown to have a direct effect on isolated small bowel and it is known also that curare inhibits to some extent the action of the vagus nerve. It is impossible with the available data to determine which of the factors is dominant. It is anticipated that no residual action of curare will remain which might predispose toward postoperative ileus.

There is minimal detoxication of curare in the liver and most of it is excreted, unchanged, by the kidney. Although it might be surmised, there is no evidence as yet that liver or kidney damage results in cumulative depression.

The effect of the drug on the uterus has not been studied. A number of patients have been given curare for purposes of abdominal muscle relaxation during cesarean section without any apparent effect on the infant. Studies have not been made on alterations of the blood elements and chemistry by curare.

Curare has no analgesic property and in situations in which pain relief is necessary, relief must be secured by the most appropriate agent and technique. Curare may be used with any of the inhalation agents, with pentothal sodium, with intrathecal techniques if

Read at the Tri-State Nurse Anesthetists Assembly, May 1946, Chicago, Ill.

analgesia is present, tribromethanol in amylene hydrate, and with topical, regional, or infiltration techniques. The dose must be adjusted according to the curariform properties of the agent used. The agent most frequently used is cyclopropane. With this agent, there is no excessive or prolonged respiratory depression with optimal doses of curare. The optimal state can be achieved with relative ease, and the patient allowed the benefit of a pleasant induction, a quick recovery, and minimal postanesthetic discomfort.

Curare may be used during anesthesia with nitrous oxide, providing muscle relaxation not ordinarily secured with this anesthetic agent alone. It is expedient, if curare is to be used with nitrous oxide anesthesia, to intubate the patient and perform controlled respiration throughout the period when the greatest degree of muscular relaxation is needed. Controlled respiration assists in securing abdominal muscle relaxation and provides necessary pulmonary ventilation while intercostals and diaphragm are partially or totally paralyzed from large doses of curare. The advantages cited for this combination are prompt recovery, reduced postanesthetic distress and debility, decreased incidence and severity of shock during and after the anesthesia, and non-inflammability.

Curare may also be used during ethylene anesthesia. This agent is somewhat more potent than nitrous oxide and should provide more latitude in depth of anesthesia without asphyxia. It is, of course, nontoxic, and preferable in this respect to cyclopropane.

Curare can be used during ether anesthesia, but the dose must be reduced to one-third of that used during cyclopropane anesthesia. Experiences gained during the use of curare with ether prompted investigation into the effect of several anesthetic agents on the humoral transmission of nerve impulses. The agents studied were cyclopropane, ethylene, ether, tribromethanol with amylene hydrate (avertin fluid), and sodium ethyl (1 methylbutyl) thiobarbiturate (pentothal sodium).

It was found that humoral transmission of nerve impulses was not greatly interfered with by cyclopropane and ethylene.

The induction and establishment of cyclopropane anesthesia are performed as usual with the carbon dioxide absorption technic.

In high concentration, but within the anesthetic range, pentothal sodium and avertin fluid produced a moderate amount of interference. Ether had a marked curariform action which, interestingly enough, had been ascribed to it as early as 1914. These studies helped to make clear not only the increased depression which occurs with the concomitant use of ether and curare, but also assisted in elucidating the clinical observation of unequal muscular relaxation during equal levels of anesthesia with cyclopropane and ether. Curare is advantageous during ether anesthesia because relaxation can be obtained without deep anesthesia.

In those intra-abdominal procedures in which muscular relaxation is desired, the anesthesia is leveled off in the second plane. When the abdominal preparation or skin incision is made, the curare is introduced intravenously, and, by the time the peritoneum is opened, the maximum effect of the initial dose is obtained. Most adults in good health will tolerate at least 0.060 units (3 cc.

Intocostrin) as an initial dose. If this proves insufficient, one-half to two-thirds of the initial dose is added after three to five minutes. To this may be added smaller quantities until the optimal state of quiet breathing, complete relaxation, and contraction of the intestine is attained. Once attained, this state usually can be maintained until closure of the abdomen. It is rarely necessary to add curare during long operations, but, if the procedure lasts longer than forty-five minutes, it is usually necessary to add one-half to two-thirds of the initial dose to facilitate closure of the peritoneum.

The action of curare is restricted to approximately twenty minutes. It is advisable then, when using inhalation anesthesia, to use an agent which has the ability to provide moderate muscular relaxation by itself. Curare, preferably, is used to produce only added relaxation when the occasion demands. When less potent inhalation agents are used, all relaxation must be obtained with the curare, and the hazards attending its excessive and prolonged use may appear. The use of curare with a topical anesthetic technique is limited chiefly to endoscopic manipulations during which it is difficult to obtain sufficient relaxation to permit easy and nontraumatic examination.

Curare has proved useful as a means of obtaining improved muscle relaxation during anesthesia. It is a safe drug when used in the proper fashion. Its chief disadvantage is the relatively narrow margin between the optimal dose and the dose producing respiratory paralysis. It should be used only when means of producing efficient artificial respiration and prostigmine are immediately at hand. Further, it should be used only by those experienced in the science and art of inhalation anesthesia and should not be used to cover up errors of commission and omission in the anesthetic technique. It will gain and retain respect as a useful adjunct to anesthesia if it is employed within the limits of its pharmacologic properties and is not abused by excessive and indiscriminate use.

Educational Exhibit

This is an appeal to all individual members from the Educational Exhibits Committee for unique, original, and practical ideas you are using and have found helpful in your practice of anesthesia. No matter what you have —how simple and economical, nor what its uses—it will be of paramount interest to us. We are looking for "Departmental Handies" in the form of homemade equipment, used for the administration of anesthetics or inhalation therapy. These are to be exhibited at our booth at the annual convention in Philadelphia, September 30-October 3.

Remember, it is the simple, practical gadget that is often most useful. No matter what you have been using in this line, you are URGED to submit your ideas. Let us improve our Association by sharing our knowledge while, at the same time, we provide an interesting and unusual exhibit for the convention.

Send suggestions, not later than August 24 to:

Marie N. Bader, Chairman
Margery Reed Memorial Hospital
2300 N. Cascade Avenue
Colorado Springs, Colorado

Indications for the Use of Oxygen

By MRS. ELIZABETH BLANCHARD COLEMAN,
Salem, Oregon

In connection with the entire subject of gas therapy the objective of the anesthetist may be, broadly speaking, twofold: (1) To understand thoroughly the basic reasons for the use of the therapeutic gases, as well as to gain proficiency in the administration of these gases by various methods. (2) To encourage the internist and surgeon to give their patients the benefit of therapeutic gases in the innumerable conditions for which they may be indicated.

The anesthetist is consciously aware of the vital need of continuous oxygen for the normal functioning of the body systems. Because she is so closely associated with the mechanism of respiration, both internal and external, she is alert to the many conditions which produce the physiological need for the therapeutic use of oxygen. In order to study the influence of various diseases and other factors affecting normal physiology and necessitating an increase in arterial oxygen tension, the following classifications will be found under OXYGEN—ITS THERAPEUTIC VALUE, *Study Guide 1:*

1. Respiratory.
2. Circulatory.
3. Miscellaneous.
4. Postoperative uses.

I shall briefly discuss the physiological pathology which exists in each condition and suggest a method, or methods, of administering oxygen for each case.

Read at the October, 1945, Institute for Instructors of Anesthesiology, Chicago, sponsored by the American Association of Nurse Anesthetists.

RESPIRATORY

Pneumonia: The pneumonia patient is in some phase of anoxia, varying in degree. This anoxia is produced by the consolidated areas of lung tissue which prohibit the flow of oxygenated blood through the pulmonary capillaries, or edema of the surrounding alveoli ducts which prohibits this same circulation.

The outstanding clinical signs which indicate the use of oxygen are: rapid pulse; increased, difficult, or shallow breathing; delirium, with or *without* the presence of cyanosis. The purpose of administering oxygen is to maintain lung function in respect to the absorption of oxygen, so as to provide nourishment to the vital organs.

The nasal catheter method is suggested, although some patients may be more comfortable in an oxygen tent.

Pulmonary Edema: The exudation of serum from blood in the pulmonary

capillaries into the alveoli occurs in all types of pulmonary edema. This condition may be secondary to any number of diseases, such as heart disease, peripheral circulatory failure, obstructive lesions of the respiratory tract, asthma, gas poison, or other irritants.

Inhalation of oxygen-enriched atmosphere is indicated, using a positive-pressure method as the basis of treatment. At first, the pressure employed is 3 to 5 cms. of water and decreased as the condition improves.

Pulmonary Infarction: This is a result of an embolus or thrombus occluding some branch of the pulmonary artery. Therefore, a portion of lung tissue, without air, is filled with blood as a result. Shock often ensues.

High concentration (70% to 100%) of oxygen by mask is indicated to overcome anoxia and prevent shock.

Asthma: Three factors are involved: (1) The circular muscles of the small bronchi are constricted; (2) there is a swelling of the bronchial mucous membrane; (3) a formation of mucus.

The existence of these factors compel the patient to breathe through a constricted orifice, and because of this small lumen for breathing, an increase in negative intrapleural pressure develops. This, in turn, causes a cupping of the pulmonary capillaries and exudation of serum and mucus into the alveoli.

At first, dyspnea is due to the physical effort used to deliver air into the lung, but later, pulmonary ventilation is decreased and the resulting anoxia causes labored breathing.

It might be mentioned here that, in the early stage of an attack, the inhalation of pure oxygen may be detrimental because of the increase in specific gravity as compared to air. Oxygen is administered to relieve anoxia.

A positive-pressure technique is employed (helmet-hood) to deliver a mixture of helium 70% and oxygen 30% to the patient under 3 to 6 cms. water pressure. For cases of refractory asthma, it is suggested that the patient be given inhalation of a spray of 0.5 cc. of 1:100 epinephrine, vaporized by a stream of oxygen (5 liters per minute) from a high-pressure tank to a nebulizer.

Lung Irritants: Lung irritants either cause damage to the alveoli, or produce an edema, causing an obstruction of the bronchi, or both. The ultimate result is pulmonary edema and broncho-pneumonia. Oxygen under positive pressure, as given for pulmonary edema, is the specific treatment.

I should like to emphasize the importance of always clearing the airway as much as possible before the administration of oxygen. Employment of intratracheal suction is of great value in some cases.

Obstructive Lesions: Production of what is known as "obstructive dyspnea" is the result of the presence of a foreign substance obstructing the respiratory passages, either tumors, enlarged glands, foreign bodies, blood, mucus or edema from infections and irritants. Whatever other treatment is necessary for the removal of the causative factor, it is essential that oxygen absorption be maintained. Again, the problem of increased negative intrapleural pressure is to be met.

High oxygen concentration (70% to 100%) providing for 3 to 6 cms. positive pressure is beneficial. However, a mixture of 25% to 30% oxygen in helium may be more effective. The helmet-hood apparatus is recommended. In this condition, it is essential that the relative humidity be high: from 60% to 90%.

Tuberculosis (Chronic): This disease causes degeneration of lung tissue, thereby lowering the vital capacity. Much experimentation has been made as to the value of oxygen therapy, and there is no evidence that it has led toward a permanent cure. However, those patients who have dyspnea are markedly relieved by its use, so it is certainly worthwhile to such individuals.

Moderate concentration of oxygen (40% to 50%) is adequate and may be given by nasal catheter, which is a simple and effective method for this percentage of concentration.

Paralysis: Paralysis of the intercostal muscles disrupts the mechanical rhythm of respiration producing rebreathing between the upper and lower portions of the lungs. This results in anoxia and dyspnea.

Primarily, the treatment of this condition is directed toward restoring the function of the respiratory musculature, at the same time providing the metabolic requirement of oxygen for proper tissue oxidation.

The respirator is beneficially used, inspiration being initiated in the negative phase of the machine's operation, and expiration being usually passive. In conjunction with the machine, a supply of oxygen, 50% by nasal catheter, may be given to overcome anoxia.

Congestive Heart Failure: The word congestive, alone, explains this condition. Due to impairment of the function of the ventricles there is a damming back of blood in the vessels of the lungs, reducing the vital capacity and the diffusion of oxygen. The patient has dyspnea and shortness of breath. The engorgement of the lungs requires him to increase his breathing, thus increasing the volume of lung ventilation, but the most important factor is the tissue anoxia caused by stagnant circulation. There is, also, a failure of urinary output.

Inhalation of an oxygen concentration of 50% will: (1) Relieve dyspnea by decreasing the volume of lung ventilation; (2) overcome anoxia by increasing tissue oxygen tension; (3) produce diuresis due to improvement of cardiac function and a decrease in blood chloride.

The tent method is suggested as the patient may be made more comfortable for a longer period of therapy. An oxygen room is preferred, if available.

Coronary: This disease is the result of the obstruction, by thrombus or sclerosis, of the coronary arteries which circulate the blood to the cardiac muscle. There is evidence of acute cardiac pain due to anoxia of the heart muscle. This is followed by shock and, perhaps, congestive failure.

Oxygen is of unmistakable value in relieving cardiac pain, decreasing dyspnea and cyanosis, and lowering the pulse rate.

High concentration of oxygen up to 100% by mask is most desirable in the acute stage.

Peripheral Arteriosclerosis: Localized tissue anoxia is demonstrated where there is an occlusion of an artery supplying this tissue.

Clinical study of the use of oxygen in this condition has not been extensive. However, it has been noted that relief from pain follows the inhalation of 100% oxygen. The continuous use of 50% to 70% improves the healing of gangrenous ulcers.

The mask method (B.L.B. or O.E.M.) should always be employed where high concentrations (70% to 100%) of oxygen are required.

Cerebral Embolism: This is another

condition in which there is localized anoxia of the organ or tissues supplied by the vessel that is occluded.

Since the brain is the organ most readily damaged by anoxia, oxygen is valuable in preventing more severe brain necrosis. It may also be an aid in the development of a collateral circulation.

In the beginning of treatment, oxygen 100% by mask is given, followed by lower concentration.

Hemorrhage: Severe hemorrhage actually reduces the oxygen-carrying power by decreasing the total hemoglobin, producing an anemic anoxia. Restoration of blood volume is, of course, imperative. Oxygen therapy is instituted to prevent impairment of function of the brain and heart.

Oxygen 100% by mask is given.

Shock: Regardless of the theories of shock, there is one fact that is no longer open to question. That fact is the damaging effect of anoxia, which is present in shock, on the central nervous system and heart function. There is a generalized slowing of circulation and extensive tissue oxygen-want.

Although oxygen does not restore circulation to normal, it may prevent results of anoxia and aid in the patient's recovery.

Pure oxygen is indicated by mask.

MISCELLANEOUS CONDITIONS

Migraine: There is little clinical experience with oxygen administration in this condition recorded. It is mentioned, however, because it has been reported that an attack may sometimes be averted by its early use.

High concentration of oxygen by mask for one hour is given, but is useless after that time if there has been no relief.

Gas Gangrene: In this condition, also, there has been little experience with oxygen. Yet there is a definite basis for its use in view of the fact that the gas gangrene bacillus is an anaerobic organism. By increasing the tissue oxygen tension, its growth is retarded. Inhalation of pure oxygen also aids in the elimination of nitrogen through the blood stream where there is tissue emphysema.

Aero-embolism: It would require a long discussion to cover this subject, but to explain the physiological phenomenon, it may be simply stated that nitrogen bubbles are produced in the tissues and blood. This occurs during high-altitude flying. The same effects are produced in deep sea divers.

The inhalation of pure oxygen results in the diffusion of nitrogen from the blood through the alveoli. Mask method is used.

Altitude Sickness: This subject like aero-embolism in altitude flying requires much study to understand it fully, but it is sufficient here to say that there is development of a state of anoxia when a person reaches an altitude of 10,000 feet. There is a reduction in the diffusion of oxygen concentration due to a decrease in oxygen pressure at this and higher altitudes. This illustrates the anoxic type of anoxia.

Administration of oxygen 100% by mask will overcome this anoxia.

Head Injuries: Concussion of the brain, even without fracture of the skull, reduces the arterial oxygen tension. Because the brain is sensitive to anoxia, this is an added reason for inhalation of oxygen.

Moderate concentration of oxygen (50%) will suffice. Nasal catheter is an effective method.

Fever Therapy: During fever ther-

apy there is a marked rise in the basal metabolic rate (seven points for each degree of temperature), a lowering of oxygen saturation of the blood following shallow breathing, a marked alkalosis as a result of rapid breathing, and pathologic changes in the brain.

Oxygen given through the period of therapy will accomplish the following: (1) Prevent tissue and brain anoxia; (2) markedly reduce pulse rate; (3) preserve the carbon-dioxide blood balance.

Nasal catheter is a practical method, the percentage of oxygen depending upon the individual demand.

Thyrotoxicosis: The toxic thyroid patient is one whose basal metabolism rate is markedly increased, therefore, one demanding more oxygen per minute. In severe cases, administration of oxygen is of definite value to reduce metabolism in preparation for surgery.

Nasal catheter method is suggested, because it is simple and the patient is not disturbed psychologically.

Extensive Burn: This condition presents the problem of extensive tissue anoxia. These patients may be benefited by the use of oxygen as a supplemental measure and aid in their recovery. The method used would depend on the nature and extent of the burn.

Toxemia: Any case of infection with accompanying fever results in a reduction of tissue oxygen and an increase in the basal metabolic rate. The correction of this hypoxia by inhalation of oxygen aids in recovery.

A tent is preferable for the febrile patient because he will be more comfortable in a cool atmosphere. However, a nasal catheter may be employed, maintaining 40% to 50% oxygen.

POST OPERATIVE USES

Postanesthetic Recovery Room: Provision of oxygen by the various methods should be a prerequisite of the postanesthesia recovery room. It means better care for the anesthetized patient and a reduction in postoperative pulmonary complications.

Post-Anesthetic Respiratory Depression: Many times at the end of an operation the patient is in a state of respiratory depression caused by the specific anesthetic agent (pentothal sodium for example), or the amount necessarily used.

The prompt use of continuous oxygen 40% to 50% will:

(1) Prevent or overcome anoxia; (2) shorten the recovery period; (3) decrease chances of postoperative pulmonary complications. Nasal catheter is a practical method.

Postoperative Shocks: The postoperative patient may be in a mild or extreme state of shock. As mentioned before, the treatment of any type of shock includes the use of oxygen merely as a supportive measure. Mask or nasal catheter method may be used.

Postoperative Toxic Thyroids: As has been stated in discussion of the thyrotoxic patient, the basal metabolic rate is markedly increased. During the postoperative period, this condition is more critical because of the added surgical procedure and the anesthetic.

This type of patient should be given the benefit of oxygen therapy for at least twenty-four hours postoperatively, for these reasons:

(1) It reduces the cardiac effort; (2) prevents the development of pulmonary complications; (3) prevents the usual rise in temperature.

The tent is the most beneficial method because of its cooling effect.

Postoperative Distention: Gaseous distention, which frequently occurs fol-

lowing even simple surgical procedures, is relieved by the inhalation of 100% oxygen. The basic principle of its use is found in the fact that it displaces nitrogen and causes it to be eliminated through the lungs. The mask method is best.

Thoracoplasty, Lobectomy, Pneumonectory: Chest surgery of any kind which induces collapse of a lung, reduces arterial oxygen saturation and produces a certain degree of shock.

Oxygen is administered to overcome this shock and maintain the oxygen tension of the blood until the patient can compensate for the effects.

Post-Encephalographic Headache: Because of the slow escape of air from the subarachnoid space following encephalogram, there are symptoms of headache and nausea. These are decreased when oxygen is used for the injection instead of air. When oxygen 100% is employed following the procedure, nitrogen is eliminated rapidly through the lungs and the duration of the headache is lessened. The mask method is best.

Conclusion: The early recognition of "oxygen want" is an essential in effective oxygen therapy. The therapy should not be delayed until cyanosis appears. Three simple rules which may be used as a guide toward successful therapy are:

1. Give early enough.
2. Give long enough.
3. Give enough.

YOUR PRESIDENT REPORTS

The plan adopted by the Board of Trustees, for two meetings of the Board during the interval between annual meetings, has proved that this is one of the best and surest ways of developing this organization. Following is a report of a Board meeting held in Cleveland, May 13 and 14, 1946.

Plans were adopted for the annual meeting and an effort made to assist the work of the various committees, such as Arrangements, Exhibits, Finance, Education, and Revisions. These committees are largely responsible to you for the success of the convention, and as this is the first meeting to be held in two years, everything possible is being done for your instruction and pleasure. Let it be a record attendance in the history of A.A.N.A. meetings.

The Finance Committee met the day before the Board convened and it is a pleasure to report that the finances of this Association are sound and stable, with a reserve fund sufficient for gradual future development. The Finance Committee recommended to the Board the appointment of a Planning Committee to act in an advisory capacity to the Board. This plan, which was accepted and put into operation immediately, will be incorporated in the proposed revisions of the by-laws.

Mrs. Marion Wark Thomas, chairman of the Post-War Planning Committee, and instructor at Johns Hopkins University, met with the Board on Monday afternoon. Discussion of the problems relating to credentials, examinations, and service-trained anesthetists revealed that the assistance this Association and hospitals are able to give returned veterans is limited because of lack of instructors and supervisors. The present student body is, with few exceptions, nearly 100 per cent army-

trained personnel, but unfortunately, there are not enough schools to meet the demand for additional training in anesthesia for all of this group.

It was voted that "The Association give all possible assistance to those hospitals having well-organized anesthesia departments with excellent clinical material available, which are in a position and desire to establish courses in Anesthesiology." The curriculum will be released from committee on August 15 and should be a valuable adjunct to schools of anesthesiology. The Board is of the opinion that members desiring specialized training in the newer anesthetics should write the schools from which they were graduated for help with their problems, for it is not possible, at the present time, to institute refresher courses.

The problems of delinquent members and requests for reinstatement, presented to the Board, were so numerous, that topics of great importance suffered from lack of time. Affiliated states, which have not met the requirements of the By-Laws of the AANA, are advised to study Article II, Sections 1, 2, and 3. Failure to comply with the by-laws jeopardizes the affiliation of any state association. Members have an individual responsibility for remitting dues and should be familiar with Article IX, Sections 4 and 5. Dues will be waived for legitimate reasons, only if requested in writing. Unless such a request is made, delinquent members are in default, and reinstatement, which is by examination only, will be more rigidly enforced in the future.

The examination program is functioning satisfactorily. Professor Adam R. Gilliland of Northwestern University, Evanston, Illinois, has been appointed to assist the Examination Committee with the theoretical and technical development of this program.

Mrs. Van Arsdale was appointed to represent the Association at a conference in June, at the Mayo Clinic, Rochester, Minnesota.

It was voted to request the American Hospital Association to work jointly with the AANA in conducting institutes for nurse anesthetists. Plans are underway for at least one institute a year in different sections of the country.

The Assembly of Schools of Anesthesiology is a new venture which should prove of value to schools and further the education of the nurse anesthetist. Your attendance and help with the first assembly will determine the advisability of continuing such programs.

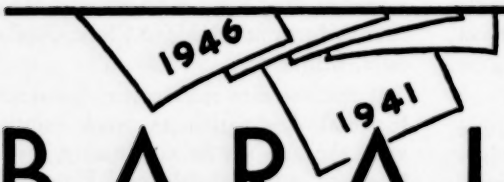
The Revisions Committee has prepared and published in this issue many revisions considered by the Board as necessary and advantageous to a growing organization. Study of these by each member will facilitate action at the business meeting.

A Joint Committee of the AHA and AANA met in Cleveland with Dr. Bradley, Barnes Hospital, presiding. This committee considered ways and means of approving schools and made recommendations to the AANA Board. The acceptance of these recommendations terminates the work of this committee. The development of the project will be reported at the annual meeting.

Reorganization of the executive staff, contingent upon acceptance of the Approval Program, was discussed, but no action was taken at this time.

Many officers and committee members, who have served you long and faithfully, should not be expected to carry the burden indefinitely. Unless many members volunteer to do tasks, whether large or small, your organization will retrogress. Let us not be shortsighted, for now is the time to prove our worth.

Hazel Blanchard, Chairman
Board of Trustees, A.A.N.A.



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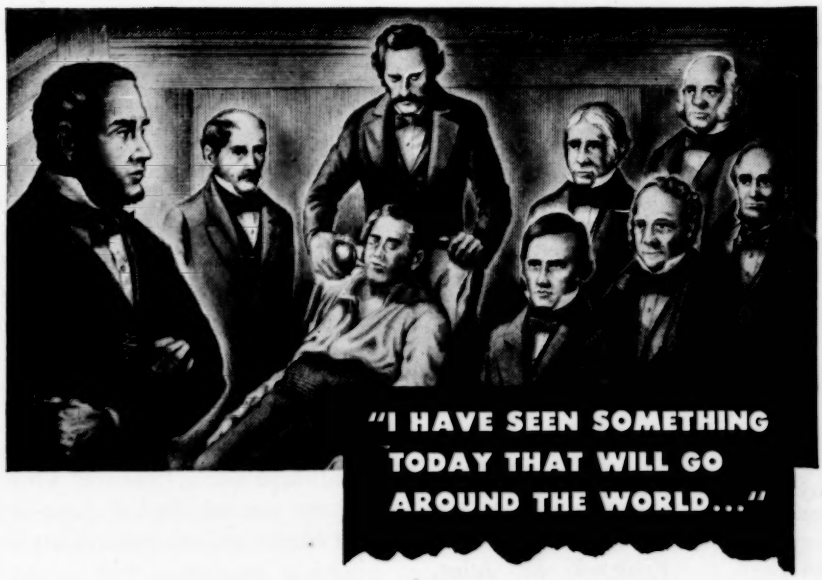

So spoke Dr. H. J. Bigelow after the completion of Dr. W. T. G. Morton's first public demonstration of "Morton's Letheon" (ether) in the amphitheater of the Massachusetts General Hospital just one hundred years ago.

Many advances in anesthesia have been made in the past century, but "ether remains and probably will remain for years to come our most useful anesthetic."[1]

"It is noteworthy that if an anesthetist gets into difficulties with any other agent, he almost invariably resorts to ether for help."[2]

Mallinckrodt's accumulated years of experience have produced an ether unsurpassed in purity, stability, and potency. It is the choice of many leading anesthetists.

1 Davison, F. R.: Synopsis of Materia Medica, Toxicology, and Pharmacology, 3rd ed., St. Louis, Mosby, 1944.

2 MacIntosh, R. R., and Pratt-Bannister, F. B.: Essentials of General Anaesthesia, 3rd ed., New York, Oxford University Press, 1943.

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ABSTRACTS

It is the aim of this department to bring before readers recent publications which we believe are of practical value to the nurse anesthetist. We shall also call to your attention articles not so recently published that are of lasting interest. Some articles will be merely listed; others will be abstracted. Wherever practical abstracting will be done by the use of direct quotations. Contributions and suggestions will be most welcome.

TITLE: Intravenous Procaine—Analgesia

AUTHOR: Frederick M. Allen, M.D., Lyman Weeks Crossman, M.D., F.A. C. S. and L. Vosburgh Lyons, M.D.

PUBLICATION: *Current Researches in Anesthesia and Analgesia.* 25: 1, January-February 1946.

ABSTRACTOR: Opal M. Schram, R.N.

"The abnormally increased capillary permeability in injured regions has long been familiar. . . . Permeability is evidently a dominant factor in the distribution of any substance in the body. The increased permeability of injured or inflamed tissues presumably accounts for the specially high concentration of drugs, such as salicylates, in such tissues as observed by pharmacologists. Research is therefore feasible to discover other agents which may be beneficially conveyed to damaged or diseased tissues. . . .

"Gordon administered procaine intravenously to ten burned patients, obtaining analgesia of the burned area, but not of other parts, unless the other parts became edematous. . . . In ten surgical cases, McLachlin found intravenous procaine infusions superior to morphine for control of postoperative pain. He admitted an antagonism between procaine and sulfathiazole. All these reports conformed precisely to the theoretical expectation; namely, relief of pain by transudation of procaine in areas where capillary permeability is increased in connection with injury, inflammation, or edema, especially when the procaine is administered with considerable fluid intravenously. . . .

". . . Lundy's procedure, adopted as a standard by Gordon and McLachlin, consists in dissolving 1 gm. of procaine in 500 or 1000 cc. of saline solution and administering it by intravenous drip in one to one and one-half hours. Pain is relieved rather soon during the injection, and the relief continues for about four or five hours. McLachlin points out that, if a rare idiosyncrasy to procaine should give rise to toxic symptoms, these may be of two types: a nervous convulsive type which can be relieved by intravenous injection of a barbiturate such as sodium amytal or sodium luminal, and a respiratory asthmatic type which can be controlled by as little as 2 minims of 1/1000 epinephrine solution given subcutaneously. The sensitiveness can be tested by beginning the intravenous procaine infusion slowly; and since such

a small amount is thus introduced and since procaine is destroyed in the liver within ten minutes, the danger is practically negligible even without antidotes. The danger is obviously less than with the ordinary infiltration, in which the operator injects an entire dose and must face the consequences. Nevertheless we make a skin test for sensitiveness as a routine preliminary in every case. . . ." Three case reports in which intravenous procaine was given successfully for relief of pain are omitted. . . . "When hypersensitiveness to procaine has been excluded by preliminary tests, and when the administration is kept within the limits set by dizziness or other subjective symptoms, there appears to be no danger whatever. . . .

"Although, according to the previously stated hypothesis, the peripheral action of procaine dominates these results, there are nevertheless central effects which are under study in this hospital and which increase as the dosage increases. Inasmuch as the subjective disturbances of dizziness, blurred speech or mental confusion were unaccompanied by signs of danger in circulation or respiration, the intravenous dosage was increased until it led into a new field of study, namely procaine anesthesia of the central nervous system. . . . In thus pushing the administration of procaine to the point of partial or complete unconsciousness, the need for greater watchfulness is obvious. Neither animal experiments nor any other information can furnish a positive guarantee of safety; but in addition to the assurance of rapid destruction of any excess of circulating procaine, the literature furnishes knowledge of two antidotes. The antidote for respiratory symptoms of intoxication is said to be epinephrine, but we have not as yet encountered such symptoms. The antidote for intoxication in the form of convulsions is a sedative, particularly an intravenously injected barbiturate. We encountered a few convulsions in the obstetric series, but they proved brief and harmless and these could probably be forestalled by closely watching the muscles. Nevertheless, because of the seriousness of such a complication, prophylaxis was necessary and was apparently found in preliminary administration of a barbiturate. . . ."

Two case reports of intravenous procaine used for general anesthesia are omitted.

"CONCLUSIONS: Intravenous procaine infusions, within the limits set by dizziness and other subjective symptoms, can relieve many forms of pain in an effective, prolonged and safe manner.

"The infusions in higher dosage produce a clinically new form of general anesthesia by action upon the central nervous system. It is hoped that this method will prove valuable for various purposes, but there has not yet been sufficient experience to define accurately the uses, limitations or possible dangers."

TITLE:	Ether Allergy: A Case Report
AUTHOR:	Major Hermann B. Stein
PUBLICATION:	*Anesthesiology,* Vol. 6, No. 5, September, 1945
ABSTRACTOR:	Opal M. Schram, R.N.

"An American soldier, age 20, was to have a laminectomy performed. . . . At 6:30 A.M. . . . he was given nembutal, grains 1½, followed an hour later

by morphine, grain ¼, and scopolamine, grain 1/150. . . .

"The inhalation anesthesia was started at 8:10 A.M. . . . Ethyl chloride induction was used by the open drop method. When the patient had stopped counting ether was given. . . . The progress was satisfactory with only a plus one excitement stage occurring. Slight cyanosis was soon evident, which disappeared when oxygen was run under the mask. After about ten minutes, when the patient was properly relaxed, the larynx was visualized with the laryngoscope. The vocal cords were found to be nicely separated, and a large Magill endotracheal tube (number 38) was passed with only a slight amount of laryngeal spasm. . . . The ether mask was reapplied, and more ether given as required . . . he was placed prone on the operating table. The duskiness reappeared. . . . With pure oxygen flowing there was no improvement in his color, although the respirations were full. The patient was at once placed on the cart in the supine position. No blood pressure reading could be elicited, although the heart was beating rapidly as heard through the stethoscope placed over the heart. No pulsations could be obtained at the radial, temporal or carotid arteries. The respirations remained full and moderately rapid in spite of the apparent circulatory collapse. . . ."

Resuscitative measures consisted of metrazol 1cc. intramuscularly foot of litter elevated 12 inches, caffeine sodiobenzoate, grains 7½, intravenously; elastic bandages wrapped around feet and legs as far as the knee, 250 cc. of plasma intravenously.

"Gradually his condition improved through a time interval of an hour and three-quarters from the original collapse. . . . He was returned to the ward. . . . Oxygen was continued nasally. Within an hour the patient's hands and eyes became moderately edematous. At 1 P.M. his temperature by rectum was 103 F. The blood pressure was 85mm. Hg systolic and 56mm. Hg diastolic and the pulse 100. . . . Two days later he was able to be out of bed.

"Six days after the original episode, laminectomy was done under spinal anesthesia. No scopolamine was given as this had been suspected to be the offending drug.

"Blood pressure remained within normal limits for twenty-five minutes after the injection of the spinal anesthetic drug, procaine. It then dropped suddenly from 92mm. Hg systolic and 60mm. Hg diastolic to 60mm. Hg systolic and 40mm. Hg diastolic. Ephedrine sulfate, 50mg., was given with beneficial results. The course of the operation from then on was uneventful.

"Several weeks after the patient had recovered from the laminectomy a skin test was made to determine the possible sensitiveness to ether. Several drops of ether were poured on the forearm without any preparation or cleansing. . . . In about a minute he complained of burning and itching. In three minutes the skin became hyperemic, with a definite outlining of the course the poured ether had taken. In five minutes a giant urticarial wheal was evident. . . .

"At no time during the administration of ether was there evidence of respiratory difficulty. There was no pulmonary edema which might be expected, nor were there any asthmatic signs such as difficulty in expelling the inspired air. The one thing which gave hope during the near catastrophe was the excellent respiratory action, as there

never was any depression of this at any time.

COMMENT AND SUMMARY

"In a case of a young soldier to be operated on under ether anesthesia, extreme circulatory collapse occurred. Through strenuous efforts and emergency therapy it was possible to save his life. Scopolamine had been blamed for this collapse. When the operation was done a few days later under spinal anesthesia, there was a marked sudden fall in the blood pressure when ether was used on the skin. This sign post was also missed. Not until some time later when the patient remarked on the irritating effect of ether on his skin when adhesive was removed was it appreciated that there might be an allergy to ether itself. . . .

"This case thus is a report of a true allergy to ether which resulted in sudden circulatory collapse and near death."

TITLE: Ether Convulsions—Discussion and Presentation of a Case.

AUTHOR: N. E. Lanahan, M.D. and Dean Elliott, B.A. Columbus, Ohio.

PUBLICATION: *Current Researches in Anesthesia and Analgesia.* 25:1, January-February 1946.

ABSTRACTOR: Opal M. Schram, R.N.

"In 1926, anesthetists were convinced that a new complication of anesthesia had suddenly made its appearance. . . . Sober reflection and search of the literature has shown that this condition did not originate in 1926, but was simply not recorded prior to that time. . . .

"No convincing argument or evidence has been presented to establish a single cause of the so-called ether convulsion. . . . There must be several factors at work—and when the right combination is present—a convulsion results, probably from cerebral irritability or reflex excitability. Although ether is usually considered one of the necessary factors, I have seen a typical clinical convulsion where no ether was being used at the time. . . .

"The physiological mechanisms most likely to be affected, either as a result of disease or anesthesia, are those concerned with heat regulation and the maintenance of the acid-base balance. Both hyperpyrexia and increased acidity result in an increased irritability of the central nervous system. The patient is usually very young and is suffering from disease or diseases causing sepsis and high temperature. More cases appear to be associated with hot weather, over-heated operating rooms, and the Trendelenburg position. . . .

"Cassels, Becker and Seevers reported the results of an interesting experiment on rats. With these rats three variables were introduced, namely, external heat, 15 per cent carbon dioxide and ether vapor. . . . The combination of these three factors in a certain sequence of exposure resulted in a further increase in the incidence of convulsions. Simultaneous exposure to heat and carbon dioxide followed by anesthetization with ether was much less favorable for the production of convulsions than the simultaneous administration of ether and heat followed later by the sudden exhibition of carbon dioxide. . . .

"Ether convulsions are characterized by twitching of the facial muscles oc-

curring during deep and prolonged ether anesthesia. The twitching rapidly spreads to the limbs and trunk until all the muscles are involved. This generalized twitching quickly becomes so violent as to form a true clinic convulsion which may actually necessitate restraint of the patient. The respiration is seriously embarrassed by spasm of the vocal cords, the intercostal muscles and probably the diaphragm. Convulsions usually stop abruptly and fifty per cent recover uneventfully. In the remainder death from circulatory failure occurs suddenly from a few minutes to a few hours after cessation of the convulsions. . . ."

The case report is omitted.

"TREATMENT: The treatment of convulsions is relatively simple, controversial and often of little value. The anesthetic must be withdrawn at once and an ample supply of oxygen given. . . . To overcome the useless efforts of the respiratory muscles it is sometimes necessary to give further anesthetic to relax them. Continuation of this effort persisting more than a minute or so produces great shock. Care must be taken to avoid an overdose. The anesthetic used is one of the shorter acting barbiturates, the actual one chosen should be that with which the anesthetist is most familiar. . . .

"CONCLUSION: This dangerous complication can usually be averted by taking particular care to remove the exciting factors in patients believed susceptible. The dehydrated pyrexial young patient should be put on a glucose-saline drip before operation, and anesthesia should not be induced until at least 500-1000 cc. have been given. All new operating room theaters should be air-conditioned. It is unnecessary to emphasize the importance of gentle surgery and of avoiding neurogenic trauma. The anesthetist should see that the depth of anesthesia is always adequate for the stage of the operation in progress.

"SUMMARY: So-called ether convulsions are not really due to ether. Several factors must be present at the same time and in a certain ratio or proportion to produce the convulsions. These factors are infection, temperature, upset in acid base balance, anesthesia, trauma of operation, duration of the surgical procedure, and humidity or lack of heat radiation."

TITLE: Cyclopropane Pituitrin Incompatibility

AUTHOR: Stanton Belinkoff, M.D.

PUBLICATION: *American Journal of Obstetrics and Gynecology*, Vol. 48, No. 1, July 1944

ABSTRACTOR: Opal M. Schram, R.N.

"It is surprising to note the paucity of cases of pituitrin shock, especially of those with fatal result, reported in the literature. It is probable that the condition is not as rare as this would indicate, but its occurrence should be kept in mind. . . .

"In this paper we should like to point out the basic pharmacologic facts with reports of two cases witnessed.

"Cyclopropane is a very potent hydrocarbon capable of producing surgical anesthesia in concentrations permitting a high percentage of oxygen in the mixture. For this reason, it has come to be demanded by obstetricians when doing cesarean sections, and rightly so, because of the short induction period and

the benefits of high oxygenation to mother and child.

"Pharmacologically, cyclopropane is a stimulant of the parasympathetic system. It causes bronchoconstriction, which may induce an asthmatic attack in a susceptible patient. It also has a tendency to produce all sorts of cardiac arrhythmias with displacements of the rhythm centers, ranging from bradycardia to ventricular fibrillation.

"Pituitrin, and extract of the posterior pituitary gland, has four principal actions. . . . The actions primarily affecting our problem are the contraction of the uterus, and the undesirable side effect of constriction of the coronary vessels. . . .

"Pituitrin may produce reactions of three types: anaphylactic, cardiac, or respiratory. The first is not particularly dangerous, especially when not in conjunction with cyclopropane anesthesia. . . . Pituitrin shock due to the action of the pressor fraction on the heart is attributed to coronary constriction followed by myocardial anoxia, dilatation of the heart, decrease in cardiac output, and fall in blood pressure, with sometimes a fatal outcome. The respiratory reactions are signified by bronchoconstriction of varying degree, simulating an asthmatic attack.

"Pituitrin is marketed in two forms, which vary only in strength, obstetrical pituitrin having 10 units per cc., and the surgical form 20 units per cc. It has been broken up into its fractions, and is obtainable as "pitocin," containing the oxytocic fraction with a very small amount of the pressor fraction, and "pitressin," which is almost purely the pressor fraction with only slight contamination by the oxytocic fraction. Pitocin, rather than pituitrin, is then evidently the drug of choice in obstetrics.

"The combined use of cyclopropane and pituitrin is fraught with danger since they are both parasympathetic stimulants. In the circulatory system they have a synergistic tendency toward the production of hypertension and/or cardiac arrhythmias. From the parasympathetic stimulation of the respiratory tract they may produce laryngospasm, crowing, stridor, or bronchoconstriction, which may range from asthmatic wheezing to massive collapse of the lungs. The bradycardia often seen may be due to vagal stimulation, direct myocardial action, or intense coronary constriction. . . .

Here follows a report of two cases in which 1 cc. of pituitrin was administered to patients under cyclopropane anesthesia with fatal results.

DISCUSSION

"In one of our cases, the depression of respiration and bronchoconstrictive effects of cyclopropane combined with the bronchoconstriction of the pituitrin produced a massive collapse of the lungs which was not disclosed while the patient was receiving a high concentration of oxygen. In the other case, the synergistic actions of the cyclopropane and pituitrin served to produce a condition of shock leading to anoxia which was irreversible. It was partially disguised during the anesthesia but once this was discontinued, the status of the patient rapidly became worse, and in spite of strong resuscitative measures, there was a fatality.

"Although pituitrin has been used in connection with cyclopropane in many cases where no untoward re-

actions were noted, this does not absolve the combination of blame. . . . Greené has recommended adding ether to the anesthetic mixture if pituitrin is to be used, depending upon the sympathetic action of the ether to counteract the parasympathetic effects of the pituitrin and cyclopropane.

COMMENT

"Pituitrin shock is greatly accentuated when it occurs under cyclopropane anesthesia, and may cause a fatality. There are two ways to prevent this: first, by using ether along with the cyclopropane; and secondly, by not using pituitrin. Pitocin, the oxytocic fraction of pituitrin, is just as good in causing uterine contraction, without any of the side effects of pituitrin, and in many obstetric clinics has supplanted it. Ergonovine in any of its forms is an excellent and rapidly acting oxytocic and can be used for this purpose instead of pituitrin. By using either of these alternatives, an extremely unfortunate accident can be avoided."

GRACE HOSPITAL HONORS DR. MYRA BABCOCK

In honor of Myra E. Babcock, M.D., Director of Anesthesia, staff members of Grace Hospital, Detroit, Michigan, have established a $2,000 loan fund for students in anesthesia. Dr. Babcock, who has trained more than 650 nurse anesthetists, may recommend worthy students for loans from the fund. Loans are to be repaid, without interest, at the end of the first year of employment.

Correction—An error occurred in the article entitled "An Outline of Analeptic Drugs," in the May 1946 issue of THE JOURNAL. On page 22 under "Ephedrine," the sub-head should have read "Contra-indications for use," instead of "Indications for use."

EDNA M. PETERSON, president of the California State Association of Nurse Anesthetists.

MARY P. COPLEY, president of the Virginia State Association of Nurse Anesthetists.

ASSOCIATION News
State, Regional and National

Alabama . . .

The annual meeting of the Alabama Association of Nurse Anesthetists was held June 7, 1946 in the Emerald Room of the Tutweiler Hotel, Birmingham. President Thelma A. Nelson presided. Following the dinner, Thelma and Edna Nelson reported on the recent meeting of the Southeastern Assembly of Nurse Anesthetists which was held in Jacksonville, Florida.

Officers elected: President, Thelma Nelson, 918 So. 30th St., Birmingham; Vice President, Mary B. Parks, Druid City Hospital, Tuscaloosa; Secretary, Anna Traber, 2020 So. 11th Ave., Birmingham; Treasurer, Dolores Hagel, West End Baptist Hospital, Birmingham. Trustees: Della Iva Philen, Bernice Spear.

California . . .

A bi-monthly meeting of the California Association of Nurse Anesthetists was held January 17, 1946, at Children's Hospital, Oakland. There were 32 members present with President Mae Rowland presiding.

Minutes of the last bi-monthly and special meetings were read. Martha Bichel, chairman of the Salary Adjustment Committee, read a progress report. Correspondence received by the president and secretary-treasurer was read. The president appointed Jane Osborne and Claudia Lotspeich to serve on the program committee in place of two members who had resigned. It was voted to hold the annual election of officers at the March meeting.

The secretary-treasurer read an interesting letter from Sallie Taylor of Los Angeles, chairman of the anesthetists who have organized in southern California. Considerable enthusiasm is shown by the members of this group.

Following the meeting, refreshments were served by Myra B. Quarles and Mrs. Mary Roberts.

The California Association of Nurse Anesthetists held a banquet preceding its annual meeting, March 16, 1946 at the St. Francis Hotel. Mrs. Mae Rowland presided. There were 39 members and one guest present, representing ten cities. Elizabeth Arden cosmetics were given as door prizes.

A business meeting followed the banquet. Minutes of the last meeting were read and approved. The report of the secretary-treasurer showed a balance of $1,120.55. The financial report was accepted as read.

A motion, made by Mrs. Mary Hull, seconded by Irma Wilkinson, to send two delegates to the anesthetists' section of the Western Hospital Convention, Los Angeles, May 14-16, 1946 was carried. The president and secretary-treasurer were chosen as delegates, each to be allowed $75.00 for expenses.

Mrs. Sophie Jevne of Los Angeles, representing the newly organized group in southern California, gave a resume of their activities. She stated that they wish to continue their meetings, with the approval of the Board of Trustees of the California Association and the National Association. It was voted that

the "group association" continue their scientific and social meetings, electing a chairman and treasurer, but, it is understood that, in accordance with current by-laws, they have no separate status from the California Association.

A motion, made by Mary Malampy and seconded by Margaret Gosker, that the secretary-treasurer be paid $150.00 per year, retroactive to 1945, was carried.

Martha Bichel, chairman of the Salary Adjustment Committee reported on progress made since January. The San Francisco Hospital Conference invited the committee to meet with them on March 21, 1946, bringing as many signatures as possible from the anesthetists in the San Francisco area.

A motion, made by Myra Quarles, seconded by Mrs. Katherine Graham, that Mrs. Rowland be given $25.00 in appreciation of her services as president, was carried.

Geraldine Searcy, of the Publicity Committee, was given a vote of thanks. Notices of the annual meeting appeared in six newspapers.

A motion was made by Mrs. Cleo Duncan Bopp and seconded by Mrs. Alta J. Roberts that the Salary Adjustment Committee be given some remuneration. It was voted to give them gifts. A vote of thanks was given to all committee members who served during the year.

Officers elected: President, Edna M. Peterson, 1106 Bush St., San Francisco 9; 1st Vice President, Marie L. Hebert, 1547 Bancroft Way, Berkeley 3; 2nd Vice president, Martha L. Gallon, 4180 Opal St., Oakland 9; Secretary-Treasurer, Mrs. Cleo Duncan Bopp, 5760 Thornhill Drive, Oakland 11. Trustees: Mrs. Mae Rowland, Mrs. Katherine Graham, Vera Anderson.

A bi-monthly meeting of the California Association of Nurse Anesthetists was held May 14-16, 1946 at the Biltmore Hotel, Los Angeles, in conjunction with the Association of Western Hospitals. President Edna M. Peterson presided at the opening meeting. Dr. C. G. Salsbury, president of the Association of Western Hospitals, gave an address of welcome. Mrs. Sophie Jevne's welcome to Los Angeles was followed by greetings from Marie L. Hebert, vice-president of the California Association of Nurse Anesthetists. Minutes of the annual meeting were read and approved. Roll call followed, nineteen members responding.

Jane Osborne of Samuel Merritt Hospital, Oakland, gave a paper on "Curare as an Adjuvant to Pentothal Anesthesia for Intubation in Oral Surgery."

The meeting reconvened at 1:00 P.M. Mr. Billy Burke, a medical commercial photographer, showed colored motion pictures of abdominal surgery. This was followed by a reception at the home of Mrs. Jevne. The members and guests were then escorted to the Ambassador Hotel for a banquet. Dr. B. Olsen of Los Angeles was master of ceremonies. Entertainment was planned by the nurse anesthetists, group of southern California.

Mrs. Josephine Bunch, past president of the Oregon Association of Nurse Anesthetists, presided at the morning meeting May 15. B. B. Drake of E. R. Squibb and Co. showed a technicolor film on "Intocostrin in Anesthesia." A panel discussion followed. Dr. Hudson of the McKesson Appliance Co. gave a paper and demonstration on, "Minor Matters of Major Importance in Dental Surgery."

Edna M. Peterson, president of the California Association, presided at the Thursday session. Mrs. Josephine Bunch, delegate from the Oregon Association, gave a paper: "The Nurse Anesthetist's Relation to the Surgeon and Hospital." Rose O'Neill, delegate

from Washington, gave a paper: "Who is the Nurse Anesthetist?" Discussion followed.

At the business meeting, May Malamphy, seconded by Sr. M. Catherine, moved that the by-laws of the California Association be revised to permit balloting by mail. Motion carried.

Halo Warman, seconded by Stephanie Zasaske, moved that members of the California Association of Nurse Anesthetists and the American Association of Nurse Anesthetists living in southern California organize an association to be known as the Southern District Assembly, acting with a chairman, secretary and treasurer, in accordance with the current by-laws. The motion carried.

The publication of a "News Letter" by the California Association of Nurse Anesthetists to stimulate interest in California activities was discussed. It was moved by Louise Baldwin, seconded by Mary E. Doar, that this be published monthly. The motion carried. Halo Warman was appointed editor. The name is to be selected from suggestions made by the members. Three judges will be appointed by the president.

Rose O'Neill of the Washington State Association of Nurse Anesthetists, seconded by Mrs. Josephine Bunch of the Oregon Association of Nurse Anesthetists, moved that an assembly be formed, comprised of the anesthetists in California, Oregon, and Washington. The motion unanimously carried.

Sallie Taylor has opened a Medical and Dental Agency in Hollywood, California and reports that she has many good positions open in California and other western states and "really needs some applicants." Her new business is located at 7904 Santa Monica Blvd., Hollywood 46, Calif.

Florida . . .

The Florida State Association of Nurse Anesthetists held its annual meeting April 25, 1946, at the Seminole Hotel, Jacksonville.

Officers elected: President, Emily Barrett, 908 S.W. 268 St., Ft. Lauderdale; Vice President, Mrs. Louise Collins Fitch, 3315 Knight St., Jacksonville; Secretary-Treasurer, Mrs. Mary C. Brown, 1501 N.W. 2nd St., Miami 35. Trustees: Mrs. Isabel Bowles, Luta Bowen.

Georgia . . .

The Georgia State Association of Nurse Anesthetists announces the establishment of a loan library. Books may be borrowed by members or applicants for membership. Requests should be sent to: Anesthesia Library, Mrs. Durice Dickerson Hanson, 131 Forrest Ave., N.E., Atlanta, Georgia.

The following books are available:
Adams: Anesthesia Abstracts, Vol. 17
Adriani: Chemistry of Anesthesia
Andrews: Oxygen Therapy Technique
Barach: Inhalational Therapy
Flagg: Anesthesia
Gillespie: Endotracheal Anesthesia
Kimber and Gray: Anatomy and Physiology
Mason: Pre and Postoperative Care
Raper: Man Against Pain
Van Liere: Anoxia
White: Heart Diseases

Illinois . . .

A general meeting of the Illinois State Association of Nurse Anesthetists was held Thursday evening, March 28, 1946, at the North Avenue Y.M.C.A., Chicago. The meeting was called to order by the President, Mrs. Julia Baines. The minutes of the last meeting were read and approved. Mrs. Baines reported the resignation of the first vice

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HELP WANTED: ANESTHETIST for 100-bed hospital. New equipment. Good salary and maintenance. Belmont Community Hospital Association, Chicago, Ill., Gertrude F. Schofield, Supt.

NURSE ANESTHETISTS WANTED: By 85-bed general hospital, A.C.S., A.H.A., A.M.A., approved. For particulars write Director, Grace Hospital, 401 W. Grace Street, Richmond, Va.

WANTED NURSE ANESTHETIST: For 106-bed hospital in the suburbs of Philadelphia. Starting salary $150, with full maintenance. Please apply in writing to Chief Anesthetist, Chestnut Hill Hospital, Philadelphia 18, Pa.

WANTED: Two nurse anesthetists: salary open. Write Administrator, Lewis-Gale Hospital, Roanoke, Virginia.

WANTED: Nurse Anesthetists for 500-bed hospital. Salary $225 plus laundry. Over 48 hours paid overtime. Staffed with 10 to 12 anesthetists and approved by A.C.S. Write: Director of Anesthesia, Harper Hospital, 3825 Brush St., Detroit 1, Mich.

WANTED TWO NURSE ANESTHETISTS. 150-bed hospital. Five nurse anesthetists employed. Attractive salary, no maintenance. Majority of surgical work performed during the morning. Only small amount of emergency work. For particulars write Scott & White Hospital, Temple, Texas, c-o G. V. Brindley, M.D.

WANTED: Anesthetists and surgical supervisor (combination) for 95-bed hospital. Salary, $260, less $50 for maintenance. Traveling expenses refunded at end of year of service. Wilcox Memorial Hospital, Lihue, Kauai, T.H.

ANESTHETISTS! Excellent positions open in California and all western states. Communicate with: Medical and Dental Agency, 7904 Santa Monica Blvd., Hollywood, 46, California.

WANTED: Nurse anesthetists. Salary $250 per month with maintenance. Write: St. Elizabeth Hospital, Dayton, Ohio.

ANESTHETISTS: 200-bed private hospital; A.M.A., and A.C.S., approved; salary open. Philip Villmer, Jr., Fairview Park Hospital, 3305 Franklin Blvd., Cleveland 13, Ohio.

This page is being reserved for classified advertisements of any nature, with particular emphasis on "position open" and "position wanted" insertions.

AMERICAN ASSOCIATION OF NURSE ANESTHETISTS

18. E. Division Street **Chicago 10, Illinois**

president, Elizabeth Zech. Mrs. Corinne Millen will fill the vacancy. The president reported that the annual business meeting will be held in the fall.

The meeting was turned over to the program chairman, Mrs. Opal Schram, who introduced Paul Hollinger, M.D., Associate Professor, University of Illinois, staff member of St. Luke's and Children's Hospitals, Chicago. The subject of Dr. Hollinger's paper was, "A Kodachrome Clinic of Diseases of the Lower Respiratory Tract." It was illustrated by a film, "Larynx and Tracheobronchial Tree Lesions Necessitating Tracheotomy." The majority of these operations are done under local anesthetics. Avertin, supplemented with ether vapor through a tracheotomy tube is preferred for a general anesthetic.

Anesthesia students from Chicago hospitals were guests. Refreshments were served following the meeting, at which 47 members were present.

Indiana . . .

Officers of the Indiana State Association of Nurse Anesthetists elected for 1946-47: President, Mrs. Marie Petrowske, 9 Wildwood Road, Hammond; Vice President, Lucille E. Pohler, Marion General Hospital, Marion; Secretary-Treasurer, Agnes M. Lange, 326 Arcadia Court, Ft. Wayne 6. Trustees: (one year) Irene Efinger; (two years) Wilma Jo Axel; (three years) Pauline Benn.

Iowa . . .

The Iowa State Association of Nurse Anesthetists held its sixth annual meeting April 15, at the Fort Des Moines Hotel, Des Moines, in conjunction with the Hospital Association. A short business meeting was called to order by the President, Louise Phillips at 11:00 A.M.

It was voted that the by-laws be revised to comply with those of the National Association. Officers elected: President, Mrs. Lucy Brabec, Mercy Hospital, Fort Dodge; Vice President, Mrs. Lucile Catterson, 515 High Ave.,

HAZEL K. NELSON, president of the Utah State Association of Nurse Anesthetists.

MARIE PETROWSKE, president of the Indiana State Association of Nurse Anesthetists

E., Oskaloosa; Treasurer, Mary Culp. 1815 6th Ave., Des Moines; Secretary, Phyllis Roberts, 401 W. State St., Jefferson.

A luncheon was served at noon, following which, Dr. Abbott of Des Moines gave an illustrated talk on "War Neuro-Surgery." Dr. Leo Pearlman discussed "Endotracheal Anesthesia."

Michigan . . .

New officers of the Michigan State Association of Nurse Anesthetists are: President, Mrs. Gertrude Myers, 15495 Manor Ave., Detroit 21; 1st Vice President, E. Louise Ilgenfritz, 1340 E. Grand Blvd., Detroit 11; 2nd Vice President, Evelyn Y. Buferd, 22915 Beach St., Dearborn; Secretary, Theresa M. Veroni, St. Mary's Hospital, Detroit 26; Treasurer, Esther Jane Meil, 8231 Merrill, Detroit 2.

A meeting of the Michigan State Association of Nurse Anesthetists was held May 11, 1946, at Mt. Carmel Mercy Hospital, Detroit. Reports of the Tri-State Assembly were given by Ione Wessinger and Ethel Moir. Sister M. La Sallete presented a paper on "Premedication."

The members of the association were the guests of the Sisters of Mt. Carmel Mercy Hospital at supper, Sr. Helen Marie was the hostess. Following the supper, there was a conducted tour of the hospital.

At the evening session Esther Hendricks, Harper Hospital, Detroit, gave a paper on "Our Post-Anesthesia Room." This was followed by John E. Webster, M.D., Wayne University College of Medicine, Detroit, whose talk on "Neurological Surgery," was illustrated by motion pictures taken overseas.

Minnesota . . .

The twelfth annual meeting of the Minnesota Association of Nurse Anesthetists was held May 26, 1946, at the Lowry Hotel, St. Paul, in conjunction with the Minnesota Hospital Association.

The following papers were presented: "Anesthesia in Neurological Surgery," Wallace Ritchie, M.D., St. Paul; "Observations on Anesthesia Literature," Florence McQuillen, Mayo Clinic, Rochester; "Balanced Anesthesia," John Lundy, M.D., Mayo Clinic, Rochester; "Anoxia" Margaret Anderson, M.D., Fairview Hospital, Minneapolis.

On Monday, May 27, there was a panel discussion of representatives of the allied organizations, led by Dr. William O'Brien and Dr. Malcolm MacEachern. Palma Anderson represented the anesthetists.

Officers elected: President, Elaine Striemer, Miller Hospital, St. Paul 2; Vice President Maple A. Baer, St. John's Hospital, St. Paul 6; Secretary, Rowena M. Guderian, Midway Hospital, St. Paul 4; Treasurer, Ellen Lonergan, 1840 Palace, St. Paul 5. Trustees: Marie J. Gronvold, Grace Merick, Hazel Peterson, Ruth G. Kiely. Delegates to annual convention AANA: Ruth Bergman, Florence McQuillen; alternates, Ellen Lonergan, Martha Lundgaard.

The Minnesota Association of Nurse Anesthetists held a meeting on March 26, 1946 at the Swedish Hospital, Minneapolis. Katherine Jurgensen, Christine Nickles, Elizabeth Jons, and Bernice Schmidt were the hostesses. There were 26 members and four guests present. Mrs. Roy Jones gave a vivid, inspiring reading of "Poppa was a Preacher," by Eileen Porter. A delicious luncheon was served.

A meeting was held April 30 at the Nurses Club Room, St. Paul. Maple Baer and Irene Vandal were the hostesses. An informal discussion was led

by Grace Mirick on problems and questions pertaining to anesthesia.

Missouri . . .

The Missouri State Association of Nurse Anesthetists held its annual meeting April 3, 1946, at the Forest Park Hotel, St. Louis. A banquet, with 24 members present, preceded the business meeting.

Plans were made for the Missouri State Association of Nurse Anesthetists to meet in conjunction with the Missouri State Hospital Association. This meeting will be held November 29 at Hotel Jefferson, St. Louis. Anesthetists from all states will be welcome at the meeting which is planned for 9:00 A.M.-5:00 P.M.

Officers elected: President, Mildred H. Hodges, Missouri Baptist Hospital, St. Louis 8; Vice President, Hattie C. Sieg, De Paul Hospital, St. Louis 13; Secretary-Treasurer, Mrs. Kay Brouillard, City Hospital, St. Louis.

Nebraska . . .

The ninth annual meeting of the Nebraska Association of Nurse Anesthetists was held January 15 at the Methodist Hospital, Omaha, with Mrs. Wilhelmina S. Gulotta presiding and 21 members present. The president reported continuing success in our efforts for complete state-wide membership. Every eligible and active anesthetist is a member, or has made application for membership. The names of Sr. M. Bilhildis, St. Francis Hospital, Grand Island, and Eunice Henrichs, Bryan Memorial Hospital, Lincoln, were formally placed on the membership roll. They are the first anesthetists in Nebraska to win membership through examination.

The members were delighted to have Lt. Ruby Christensen present. She spent two years in North Africa and Italy and had the experience of having her ship fired upon by Nazi bombers. She spoke of how much letters from friends meant while she was overseas. It was voted to present "Victory Gifts" to members who had served in the armed forces, in recognition of their patriotic services.

Roses and chrysanthemums were sent to Sr. Marie Anderson and Mrs. Laura V. Poppy, who were unable to attend the meeting.

Commander Charles McLaughlin, Omaha surgeon, aroused unusual interest with an illustrated talk on "Surgery and Anesthesia on Combatant Ships."

Dolores V. Broughton reported on the Institute for Instructors in Anesthesiology, held in Chicago, in October, 1945.

Officers elected were: President, Mrs. Wilhelmina S. Gulotta, 1734 So. 17th St., Lincoln; Vice President, Olga R. Schulz, Bryan Memorial Hospital, Lincoln 6; Secretary-Treasurer, Dolores V. Broughton, Immanuel Deaconess Hospital, Omaha. Trustees: Sr. M. Nicasia, Ann Almquist, Amanda Inselman.

New York . . .

The new Secretary is Mildred Cook, Coney Island Hospital, Brooklyn, N. Y.

North Carolina . . .

The sixth annual meeting of the North Carolina State Association of Nurse Anesthetists was held May 18, 1946, in Charlotte, with 27 members and seven guests present. The program included an address by Carl M. Flath, Charlotte Memorial Hospital, Charlotte on "The Nurse Anesthetist and the Hospital Administrator." There was an informal discussion, led by the president, Irene Boyles, on "Convictions on Problems that May Exist for the Nurse Anesthetist."

At the business meeting, the following officers were elected: President, Mae

Stroud, Cabarrus County Hospital, Concord; Vice President, Lillian M. Stansfield, North Carolina Baptist Hospital, Winston - Salem; Secretary - Treasurer, Rose E. Bollinger, Charlotte Memorial Hospital, Charlotte.

An informal banquet followed the business meeting.

Ohio . . .

Officers of the Ohio Association of Nurse Anesthetists, elected at the annual meeting, April 3 and 4, 1946, in Columbus were: President, Sr. M. Benignus, Mercy Hospital, Hamilton; 1st Vice President, Mary Alice Costello, 926 Elberon Ave., Cincinnati 5; 2nd Vice President, Florence Kocklauner, 2065 Adelbert Road, Cleveland 6; Secretary-Treasurer, Alice Meyers, 1701 West 28th St., Cleveland 13. Trustees: (3 years) Mildred Sauers; (2 years) Marcia Williams, Marvil Aumend.

Oregon . . .

A meeting of the Oregon Association of Nurse Anesthetists was held March 12, 1946, at Portland Sanitarium Nurses' Home, Portland. Preceding the business meeting, Squibb's film, "Curare" was shown and discussed. The business meeting, at which 20 members were present, was called to order by the president, Mrs. Elizabeth D. Johnson. The Nominating Committee presented its report. Refreshments were served following adjournment.

A regular meeting was held April 25, 1946, at St. Vincent's Hospital Nurses' Home, Portland. President Mrs. Elizabeth D. Johnson presided. There were 18 in attendance. Sr. M. Mannes, Holy Rosary Hospital, Ontario, Oregon, writes that she is flying to Portugal on business and will then visit in Ireland.

The next meeting, on June 11, was a picnic meeting. Officers were installed. Mrs. Josephine Bunch reported on the hospital meeting in Los Angeles.

The Oregon Association of Nurse Anesthetists held a picnic meeting June 11, 1946, at St. Vincent's Hospital, Portland, with 28 members present. The president, Mrs. Elizabeth Johnson, presided. Mrs. Josephine Bunch, delegate to the Western Hospital Association in Los Angeles, gave a detailed report of the meeting. Annual reports were given by the secretary, treasurer, editor of *Oanagram*, and the president.

Sister Agnes and Mrs. Johnson were chosen delegates to the National Convention in Philadelphia.

The first fall meeting will be September 17 at Providence Hospital, Portland.

Officers elected: President, Mrs. Elizabeth Johnson, 2417 S.E. 12th, Portland 14; 1st Vice President, Mary Davis, 2282 N.W. Northrup, Portland 10; 2nd Vice President, Jeanne Fagan, 3018 N.E. 43rd, Portland 13; Secretary, Mrs. Rose L. Gish, 2800 N. Commercial, Portland 12; Treasurer, Zola Pikesh, 2800 N. Commercial, Portland 12. Trustees: (3 years) Mrs. Marie Anderson; (2 years) Mrs. Josephine Bunch.

Pennsylvania . . .

The treasurer's report, presented at the annual meeting of the Pennsylvania State Association of Nurse Anesthetists Thursday, April 25, 1946 showed a balance of $4,514.15.

Officers elected: President, Josephine D. Casey, Fitzgerald-Mercy Hospital, Darby; 2nd Vice President, Madeleine King, 844 Park Ave., Meadville; Secretary-treasurer, Mrs. Helen Young Walker, 1824 Wallace St., Philadelphia 30. Trustees: (1944-47) Mrs. Sarah Clark Jackson, Loretta A. Hough, (third to be appointed); (1946-48) Geraldine Lansberry, Gertrude R. Clarke, Helen C. Shaughnessy.

Texas . . .

The Texas Association of Nurse Anesthetists held its tenth annual convention March 22-23, 1946, at the Hotel Texas, Fort Worth. Approximately 80 members were registered. Officers elected: President, Winnifred Hackworth, 1807 LaBranch, Houston 3; Vice President, Mrs. Jessie Compton, 702 Winston, Dallas 8; Secretary-Treasurer, Mrs. Jack K. Childress, 1002 N. 5th, Temple. Trustees: Dorothy Hoadley, Laura Hoffman, Mrs. Cordelia H. Hallette, Elsie A. Smith.

Utah . . .

The Utah State Association of Nurse Anesthetists met May 1, 1946, at the Thomas D. Dee Memorial Hospital, Ogden. It was voted to send $50 to the "Save the Children Federation, Inc.," for the aid of a needy child in Europe. It is hoped that this worthwhile project can be continued. The following officers were elected and will be installed at the September meeting: President, Mrs. Hazel C. Nelson, 1944 Van Buren Ave., Ogden; Vice President, Mayme C. Garrison, 828 So. 7th East, Salt Lake City 2; Secretary-Treasurer, Lucile Mulvane, Thomas D. Dee Memorial Hospital, Ogden. Trustees: (3 years) Viola Redd; (2 years) Gertrude Erickson; (1 year) Mrs. Lola C. McGillivray.

Virginia . . .

The eleventh annual meeting of the Virginia State Association of Nurse Anesthetists was held April 27, 1946 in the Randolph Room of the Jefferson Hotel, Richmond. There were 22 members present. The business meeting was called to order by President Vera Copeland. Reports of the secretary-treasurer, and various committees were read. Several suggested changes in the state by-laws were adopted. It was decided to have copies of the new by-laws printed and sent to each member after the annual meeting of the American Association of Nurse Anesthetists. It was voted to send flowers or cards to members who are ill.

A Committee on Public Relations was added to the state committees. Vera Copeland was appointed to serve on this committee, the duty of which is to keep track of state legislation pertaining to nurses and to the practice of anesthesia and report such to the national association.

It was decided to have a secretary and a treasurer, instead of combining the duties of the two offices in a secretary-treasurer.

A motion was made and carried to pay the expenses of trustees who attend meetings of the Board of Trustees. The expenses are not to exceed $10.00 per member.

The Nominating Committee reported that it was unable to present a ballot. Officers were nominated from the floor and duly elected. The new president made a speech of acceptance, after which the meeting adjourned.

Members and guests attended a banquet in the Jefferson Hotel. Dr. Guy Horsley, St. Elizabeth's Hospital, Richmond, showed motion pictures taken in North Africa and Italy showing the work of the 45th General Hospital, with which he served.

Officers elected: President, Mary Powell Copley, De Paul Hospital, Norfolk 5; Vice President, Nell Luther, Elizabeth Buxton Hospital, Newport News; Secretary, Virginia De Maio, De Paul Hospital, Norfolk 5; Treasurer, Susan C. Prince, Winchester Memorial Hospital, Winchester. Trustees: (1 year) Mrs. Hazel Wells; (2 years) Mrs. Clara Hudgins; (3 years) Mrs. Geneva R. Watkins.

Washington . . .

The eighth annual meeting of the Washington State Association of Nurse Anesthetists opened with a luncheon on March 14, 1946 in the Winthrop Hotel, Tacoma. There were 40 members present. Sylvia Chapman was program chairman. Mrs. Marguerite Layton sang several solos during the luncheon.

At the business meeting, silent tribute was paid to three members who passed away during the year, May Butler, Lt. Florence Grewer, and Mrs. Florence McKinley.

The minutes of the 1945 meeting were read by the secretary. These were approved, as corrected. The treasurer's report was read and accepted. Reports of the following committees were read and accepted: Membership, Legislation, Auditing, Revisions, Pin, Program. Correspondence affecting the state association was read.

The question of per capita dues and expenses in each division of the state was raised and a motion passed that dues and expenses be divided between the eastern and western divisions on a per capita basis. A motion was passed to send Rose O'Neill as delegate to the Los Angeles Convention. By unanimous vote, Pearl Andrews was elected an honorary inactive member of the state association. A motion that only past officers be eligible for the presidency was carried unanimously.

Dr. Frank Madison gave a talk on his experiences in Japan, where he spent considerable time with the occupation forces of the U. S. Army. He showed many interesting souvenirs, dealing with the customs of the Japanese people. Following his lecture, he cited a case of air embolism which he has seen since his resumption of civilian practice. This was exceptionally interesting to nurse anesthetists.

Officers elected: President, Ragna Wigen, 2332 W. Mallon, Spokane 12; Vice President, Catherine L. McCormick, 1717 E. Spring, Seattle; Secretary, Mrs. Audrew Shaw, 1108 Ninth Ave., Seattle 1; Treasurer, Jean Covington, Providence Hospital, Seattle. Directors: Sylvia Chapman, Mrs. Marcella Wilhelmy; (holding over from 1945) Elizabeth Scully, Mrs. Nora W. Dell.

The business meeting was adjourned. A banquet, in conjunction with the Washington State Hospital Association, was held in the Crystal Room of the Winthrop Hotel.

Wisconsin . . .

Officers elected at the annual meeting, May 2, 1946, were: President, Esther Edwards, Wausau Memorial Hospital, Wausau; Secretary, Mrs. Mary Schmidt, Beloit Municipal Hospital, Beloit.

TRI-STATE NURSE ANESTHETISTS ASSEMBLY

A meeting of the Tri-State Nurse Anesthetist Assembly was held May 1-3, 1946, at the Palmer House, Chicago, with a record-breaking attendance. The opening meeting was called to order by the chairman, Mrs. Mae B. Cameron who turned the meeting over to Mrs. Jessie A. Opdale, president of the Wisconsin State Association of Nurse Anesthetists. Malcolm T. MacEachern, chairman of the Tri-State Hospital Assembly, brought greetings from that group. Greetings from the Illinois State Association of Nurse Anesthetists were given by the president, Mrs. Julia Baines, and from the National Association by the Executive Secretary, Anne M. Campbell, who read a message from Hazel

Blanchard, the president.

The luncheon on May 2, with Esther Edwards of Wisconsin presiding, was well attended. The business meeting of the Assembly followed the luncheon, at which time officers were elected. Illinois, Indiana, Michigan and Wisconsin also held their regular state meetings on May 2.

Since many of the excellent papers presented at the Assembly will be published in future issues of THE JOURNAL, no resume of them will be printed at this time.

Officers elected: Chairman, Mrs. Julia Baines, 1096 Lee St., Des Plaines, Illinois; Vice Chairman, Mrs. Gladys Hoffman Calhoun, Englewood Hospital, Chicago 21, Illinois. Secretary-treasurer, (appointed by Board of Directors) Edith McGinley, Ravenswood Hospital, Chicago 40, Illinois.

In accepting the chairmanship, Mrs. Baines paid high tribute to the retiring chairman, Mrs. Mae B. Cameron. She cited these facts: Six years ago Mrs. Cameron assumed the responsibility of organizing the Tri-State Assembly and has carried that responsibility to the present time. She has given unstintingly of herself, her time and effort to the school of anesthesia at Ravenswood Hospital, to the Illinois State Association of Nurse Anesthetists, and "to her in a very large measure, is due the success of the Tri-State Assembly. There are few in the profession who are more aware of the issues faced by the nurse anesthetists today, nor of how to handle them."

Members of the Assembly gave a rising vote of thanks, appreciation, and respect to Mrs. Cameron for the years of service she has given to make the Assembly the success it is. In recognition of her services to the Tri-State Assembly, the members presented a purse containing $135 to Mrs. Cameron.

SOUTHEASTERN ASSEMBLY OF NURSE ANESTHETISTS

The ninth annual meeting of the Southeastern Assembly of Nurse Anesthetists was held April 25-27, 1946, in conjunction with the Southeastern Hospital Association. Meetings were held in the Seminole Hotel, Jacksonville. Mrs. Rubye Ridley of Atlanta, Georgia, presided at the business meetings. Billie Caraway, of Atlanta, Georgia was elected president for the coming year. The Board, comprising the presidents of the member states of the Southeastern Assembly, appointed Mrs. Boykin Davis, 815 S. St. Andrews St., Dothan, Alabama, as secretary-treasurer.

An excellent educational program was presented. The papers were enthusiastically received and discussed by those present. The meeting adjourned, to meet in 1947 in conjunction with the Southeastern Hospital Association. This meeting will probably be held in Mississippi.

NEW ENGLAND ASSEMBLY

At the New England Assembly of Nurse Anesthetists held March 12, 1946, at the Statler Hotel, Boston, Mass., the following officers were elected.

President, Mrs. Esther Myers-Stephenson; vice president, Betty Lank; secretary-treasurer, Evelyn C. Nordeen. Trustees: Maine, Mrs. Ann Decker; New Hampshire, Mrs. Florence Hale; Vermont, Gertrude DeSautels; Massachusetts, Elizabeth MacRae; Rhode Island, Agnes Collins; Connecticut, Elsie McKenzie.

Program

SCHOOLS OF ANESTHESIOLOGY ASSEMBLY PROGRAM
HOTEL PHILADELPHIAN, PHILADELPHIA, PENNSYLVANIA

SATURDAY, SEPTEMBER 28

9:00 A.M.—12 NOON

Greetings: Hazel Blanchard, President, American Association of Nurse Anesthetists

Demonstration of Classroom Technique: "The Pharmaco-dynamics of Cyclopropane with Special Reference to Respiration, Circulation and Premedication."

Instructor—Evelyn Auld, Durham, N. C.

Student—Mary Snively, Durham, N. C.

Lecture: "Methods Used in Teaching Technique of Administering Cyclopropane."

Martha Lundgaard, Minneapolis, Minnesota
Sr. M. Borromea, Peoria, Illinois

2:00 P.M.—5:00 P.M.

Lecture "Testing and Intelligence Tests."

Demonstration "Administration of Intelligence Tests."

Adam R. Gilliland, Ph.D., Professor, Educational Psychology, Northwestern University, Evanston, Illinois

7:00—9:00 P.M.

"Report and Interpretation of the Findings on the Qualifying Examinations."
Miriam Shupp, Cleveland, Ohio

SUNDAY, SEPTEMBER 29

9:00 A.M.—12 NOON

Discussion: "The Curriculum and How It Can Be Followed."
Alma Webb, Austin, Texas

"Future Developments of Schools of Anesthesiology."
Hazel Blanchard, Wellsboro, Pennsylvania

2:00—5:00 P.M.

Information Please: "School Problems."
Opal Schram, Chicago, Illinois
Marion Wark Thomas, Baltimore, Maryland
Mabel Courtney, Detroit, Michigan
Frances Hess, Brooklyn, N. Y.
Edith-Helen Holmes, Chicago, Illinois

Lucy Richards, Cleveland, Ohio
Helen Lamb, St. Louis, Missouri
Elizabeth Coleman Blanchard, Salem, Oregon
Eletta Engum Silver, Union Grove, Wisconsin
Hilda Salomon, Philadelphia, Pennsylvania
Mary Snively, Durham, North Carolina
Gertrude Fife, Cleveland, Ohio
Lillian Baird, Ann Arbor, Michigan
Mae Cameron, Chicago, Illinois
Gertrude Myers, Detroit, Michigan
Ann Decker, Portland, Maine
Sr. Rudolpha, Springfield, Illinois
Florence A. McQuillen, Rochester, Minnesota
Sr. Seraphia, Springfield, Illinois
Janet McMahon, Cleveland, Ohio

Program

THIRTEENTH ANNUAL CONVENTION

AMERICAN ASSOCIATION OF NURSE ANESTHETISTS, PHILADELPHIA, PENNSYLVANIA

September 30-October 3, 1946

Held in Conjunction with American Hospital Association Convention

HOTEL HEADQUARTERS—HOTEL PHILADELPHIAN

The Business Meeting and all General Sessions will be held in Convention Hall, which is within walking distance of the Hotel Philadelphian.

MONDAY, SEPTEMBER 30

9:00 A.M.—12 NOON

Registration—Convention Hall

The exhibits will be in Convention Hall and it is hoped that the members will visit them after registration.

GENERAL SESSION

2:00 P.M.

Address of Welcome:

Hazel Blanchard, President, American Association of Nurse Anesthetists

Greetings:

Peter Ward, M.D., President, American Hospital Association

Panel Discussion:

"Interdepartmental Relationships"

Co-ordinator—Malcolm MacEachern, M.D., American College of Surgeons

Surgeon—Arthur Keegan, M.D., Doctors' Hospital, Philadelphia

Administrator—Robin C. Beurki, M.D., Director, Hospitals of University of Pennsylvania

Medical Director—Joseph C. Doane, M.D., Jewish Hospital, Philadelphia

Medical Anesthetist—

Superintendent—Sr. Frances DeSales, Misericordia Hospital, Philadelphia

Nurse Anesthetist—Ruth Bergman, Northwestern Hospital, Minneapolis, Minn.

TUESDAY, OCTOBER 1

BUSINESS SESSION

Conducted by Hazel Blanchard, President

8:00 A.M.

Roll Call

Approval of Minutes

Reports of Officers and Committees

Election of Officers

GENERAL SESSION

Mrs. Ann Decker, presiding

2:00 P.M.

Symposium: "How Can the Anesthetist Best Serve the Obstetrical Patient and the Newborn?"

Obstetrician—Clifford Lull, M.D., Philadelphia

Pediatrician—Ralph Tyson, M.D., University of Pennsylvania

Obstetrical Anesthetist—Sr. M. Jerome, Misericordia Hospital, Philadelphia

3:30 P.M.

"Cyclopropane in Infant Anesthesia"

Betty Lank, Chief Nurse Anesthetist, Children's Hospital, Boston, Mass.

4:00 P.M.

Council Meeting:

Hazel Blanchard, Chairman

Anne M. Campbell, Co-Chairman

WEDNESDAY, OCTOBER 2

8.00 A.M—12:00 NOON

Visit Hospital Clinics

GENERAL SESSION

Rose Donovan, presiding

2:00 P.M

"Educational Trends":

Speaker to be announced

"Legislation":

Emanuel Hayt, Author and Lecturer, New York, N. Y.

Subject and speaker to be announced

BANQUET

7:00 P.M.

Mirror Room, Hotel Philadelphian

Invocation by Dr. Louis Wolsey, Congregation Rodeph Sholem, Philadelphia

Guest Speaker: Besse Howard, WCAU Radio Commentator

THURSDAY, OCTOBER 3

9:00 A.M. **UNFINISHED BUSINESS**

10:30 A.M

Subject and speaker to be announced

LUNCHEON

12:30 P.M.

Pennsylvania Room, Hotel Philadelphian

GENERAL SESSION

2:00 P.M.

Subject and speaker to be announced

"The Heart and Anesthetics":

Alexander Margolies, M.D., Philadelphia

Subject and speaker to be announced

Additions to Membership List

ALABAMA		
Bishop, Frances	Selma Baptist Hospital	Selma
McGuire, Mrs. Viola	Eliza Coffee Mem'l Hospital	Florence
Norred, Annice, E.		Talladega Springs
Perry, Helen S.	Jefferson Hospital	Birmingham
ARIZONA		
Loehrke, Amelia J.	P. O. Box 811	Tucson
CALIFORNIA		
Hammond, Mrs. Wanda	124 Gonzalez Drive	San Francisco 12
Taylor, Jeanette	836 Hilldale Ave.	W. Hollywood
Harper, Mrs. Ruth	1617 S. Hoover	Los Angeles
Tunnell, Gladys	Box 134	Anawin
Whitmer, Liona E.	Wheeler Hospital	Gilroy
Zazaske, Stephanie	6331 Hollywood Blvd.	Hollywood
COLORADO		
Emick, Evelyn M.	105 N. 9th	Lamar
CONNECTICUT		
Eddy, Fern A.		
IDAHO		
‡Mauro, Mrs. Helen		Nezperce
ILLINOIS		
Klohucher, Catherine M.	St. Therese Hospital	Waukegan
Milroy, Mrs. Helen V.	400 S. 4th	Aurora
Scheidt, Elizabeth	355 Ridge	Evanston
IOWA		
Erickson, Merrie M.	Lutheran Hospital	Ft. Dodge
Nichols, Lucille B.	American Mission Hospital	Tanta, Egypt
Parrish, Mrs. Mae	St. Joseph's Mercy Hospital	Dubuque
KENTUCKY		
Day, Bertha		Pikesville
MASSACHUSETTS		
Nordeen, Evelyn	P.B.B. Hospital	Boston
MICHIGAN		
Hannan, Marian	8100 E. Jefferson	Detroit 14
‡St. John, Mrs. Blanche	5320 Livernois Ave.	Detroit
Woods, Mrs. Jennie	Route 3	Allegan
MISSISSIPPI		
Angland, Margaret Mary	P. O. Box 2752	Greenville
Collins, Susie M.	c/o Drs. Trudeau & O'Mara	Biloxi
Crull, Mrs. Doris L.	3603 Downing St.	Jackson
Wates, Mrs. Elizabeth N.	514½ E. Amite St.	Jackson
MISSOURI		
Thornhill, Mrs. Jessie	2319 Gaebler Ave.	Overland 14
Wolfsberger, Eugenia L.	8 Fox Meadows	Tappington 23

NEW YORK

Chiu, Mrs. Annie Wah Lee	Box 748, Grand Central Annex	New York 17
Kramer, Florence	663 N. Oak	Buffalo
McFadden, Dessie	1320 York Ave.	New York
O'Brien, Sarah Ann	911 Brooklyn Ave.	Brooklyn 3
O'Mara, Margaret M.	245 Elmwood Ave.	Buffalo 9
♯Strahle, Mary Craddock	104-52 110th St.	Richmond Hill
Swick, Marian J.	19 Archer Rd.	West Hempstead

NORTH CAROLINA

Currie, Mona Louise	c/o Mr. Walter Currie	Candor

OHIO

Nickel, Mrs. Josephine A.	134 S. Ardmore Ave.	Dayton, Ohio

OREGON

Legreid, Anne Feser	1205—29th St.	Milwaukie

PENNSYLVANIA

Clark, Janet K.		Ansonville
♯Jacobs, Mrs. Grace M.	600 W. 16th St.	Tyrone
McCabe, Margaret		Defiance
McLanahan, Naomi	Columbus Hospital	Pittsburgh
Vercusky, Frances E.	3336 N. Broad	Philadelphia

TENNESSEE

Hamilton, Mamie Baker	169 W. Colorado	Memphis
Holland, Zelia	3540 Powell Ave.	Memphis 12
Kooyman, Jacqueline C.	766 Watson	Memphis

TEXAS

Alexander, Kay Moate	Box 168	Mission Beach, Cal.
Merritt, Helen C.	1804—24th St.	Snyder
Pace, Katie	2200 College	Ft. Worth
Williams, Mary Elaine	3411 Swiss Ave.	Dallas

WASHINGTON

♯Lambert, Lillian	U. S. Marine Hospital	Seattle
Purcell, Emily S.	15 S. 9th Ave.	Yakima
♯Schmidt, Mrs. Esther E.	5715 Milentz Ave.	St. Louis, Mo.

Corrections to Membership List

CALIFORNIA

Ryan, Mrs. Margaret	General Delivery	Yuba City
(listed in May Membership List as an Idaho member)		
Sister Rose of Precious Blood	St. Joseph Hospital	Burbank

OREGON

Sanders, Mrs. Esther L.	2282 N. W. Northrup St.	Porthland 10
(listed May as Mrs. Esther L. *Saunders*)		
Sister Mary Colma	St. Elizabeth's Hospital	Baker

PENNSYLVANIA		
Palsa, Agnes A.	212 18th Ave.	Homestead
TENNESSEE		
Jones, Mrs. Isabel	3524 Murphy Road	Nashville 5
UTAH		
Garrison, Mayme C.	828 S. 7th E.	Salt Lake City
Keppler, Anna M. (listed in May as *Kepper*)	Weston	Idaho
WASHINGTON		
Nattinger, Mrs. Lola (listed in May as *Mattinger*)	811 Cobb Building	Seattle

Fourth Examination

The Fourth Qualifying Examination of the American Association of Nurse Anesthetists Will Be Held Monday, November 11, 1946. We cannot guarantee that applications for this examination can be acted upon, unless they are received at the Executive Office on or before September 1. We shall strive to act upon applications received later than September and to notify the candidates, but advise earlier application.

Applicants are reminded that this is a Qualifying Examination for membership in the Association. It is not a state or national board examination. Passing the examination does not qualify one to use the title, "Registered Nurse Anesthetist." Use of that term is incorrect, inasmuch as there is no such title as "Registered Nurse Anesthetist."

—Anne M. Campbell
Executive Secretary

Successful Candidates in First Examination—June 4, 1945

ABOUD, Selena T., Grace Hospital, Detroit, Michigan
ANDERSEN, Rosa V., 4044 No. Kerby Ave., Portland, Oregon
ARMSTRONG, Mrs. Frances E., 2606 Lavin Court, Troy, New York
BAJO, Elizabeth M., 1509 Columbus Drive, East Chicago, Indiana
BEATHAM, Sybil M., Mason, New Hampshire (Massachusetts member)
BERGER, Ruth A., Arlington Hospital, Arlington, Virginia
BONACCI, Charina C., 47 Ridge St., Seneca Falls, New York
BRECHT, Doris M., Quain and Ramstad Clinic, Bismarck, North Dakota
BROUILLARD, Mrs. Alice K., City Hospital, St. Louis, Missouri
BURMEISTER, Grace, 404 Evergreen, Chicago 10, Illinois
CAMP, Anella M., 103 Plummer Street, Oil City, Pennsylvania
CHILDERS, Fern L., Providence Hospital, Seattle, Washington
COMPAGNONE, Josephine P., 14 Thayer Street, Milford, Massachusetts
COONS, Jessie S., Box 41, Dayton, Texas

COVINGTON, Gaylis J., Providence Hospital, Seattle, Washington
CURRAN, Agnes K., 1000—6th Ave., Seattle, Washington
DAYSS, Bertha, St. Joseph's Hospital, Ann Arbor, Michigan
DENTON, Mary J., University of Michigan Hospital, Ann Arbor, Michigan
DIKSON, Mrs. Ruth A., West End Baptist Hospital, Birmingham, Alabama
DU BOIS, Marion E., Kanawha Valley Hospital, Charleston, West Virginia
ERICKSON, Gertrude E., 254 So. 3rd East, Salt Lake City, Utah
EVANS, Mrs. Margaret S., Wesley Hospital, Oklahoma City, Oklahoma
FELLER, Mrs. Inda W., 204 Woodland Ave., Punxsutawney, Pennsylvania
FITCH, Mrs. Louise C., 3315 Knight St., Jacksonville, Florida
GALLOWAY, Mrs. Etta M., Ohio Valley Hospital, Steubenville, Ohio
GEORGE, Lourene W., Carlisle Hospital, Carlisle, Pennsylvania
GETWAY, Gail R., 131 North Ave., Highland Park 3, Michigan
GRAHAM, Mrs. Hilda M., 2282 N. W. Northrup, Portland, Oregon
HAINES, Ellen H., 8617 Evergreen Road, Philadelphia, Pennsylvania
HENDERSON, Jean R., Magee Hospital, Pittsburgh, Pennsylvania
HENDERSON, Willie E., 4049 Greenview Ave., Chicago 13, Illinois
HENRICHS, Eunice M., Bryan Memorial Hospital, Lincoln, Nebraska
HOFRICHTER, Margaret, 1815—19th Ave., Seattle, Washington
HOLT, Mrs. Florence Y., East Oakland Hospital, Oakland, California
HORTON, Mrs. Mary J., St. Joseph's Hospital, Memphis, Tennessee
HUGHES, Vera C., 344—35th St., Oakland, California
JOHNSON, Alys T., 300 W. George, Pottsville, Pennsylvania
JOHNSON, Mrs. Marjorie F.
JORDAN, Mrs. Evelyn A., 15 W. 72nd St., Chicago, Illinois
KANE, Anna M., 5919 Freret St., New Orleans, Louisiana
KARAM, Anne J., 200 No. State, Ann Arbor, Michigan
KIMLING, Dorothy L., Allegheny General Hospital, Nurses Home, Pittsburgh, Pa.
LEE, Mrs. Mary M., Fayetteville, Georgia
LOUCKS, Mrs. Mary S., 209 W. Madison, Baltimore, Maryland
LYTTON, Mrs. Gertrude L., 30 Langdon St., Cambridge 38, Massachusetts
MARSH, LaVerne, 1407½ Hurley St., Fort Worth, Texas
MARSHALL, Eunice M., Peninsular General Hospital, Salisbury, Maryland
MASARYK, Emily A., South Side Unit, Youngstown Hospital, Youngstown, Ohio
McCARTY, Sara L., Ponce de Leon Infirmary, Atlanta, Georgia
MERFELD, Lt. Mary M., Camp Carson, Colorado Springs, Colorado (Missouri member)
MERKEL, Anna M., Methodist Hospital, Philadelphia, Pennsylvania
MIDTLIEN, Alborg, 5056 W. Waveland Ave., Chicago, Illinois
MILLER, Florence V., North Side Unit, Youngstown Hospital, Youngstown, Ohio
MITCHELL, Elizabeth E., 762—10th Ave., San Francisco, California
MORGAN, Josephine M., Ohio Valley General Hospital, Wheeling, West Virginia
NEIGHBOR, Virginia, West Pines Hotel, Joliet, Illinois
NILES, Blanche M., Mercy Hospital, Hamilton, Ohio
NORTHEN, Edith W., 514 W. College, Canonsburg, Pennsylvania
OLSEN, Elsie M., 1020 Seneca St., Seattle, Washington
PFEIFER, Bernadine R., 2435 W. Wisconsin Ave., Milwaukee, Wisconsin
PIERCE, Bernice V., 3611 Jenifer St., N. W., Washington, D. C.
PIERCE, Joan M., 103 Victory Drive, Savannah, Georgia
POOLE, Mrs. Gertrude L., University Hospital, Iowa City, Iowa
ROBERTSON, Elva M., Maine Eye and Ear Infirmary, Portland, Maine
ROSS, Iradelle, Wesley Hospital, Oklahoma City, Oklahoma
SCHMIDT, Mrs. Margaret W., Spartanburg General Hospital, Spartanburg, S. C.
SCHMIDT, Mrs. Mary W., Beloit Municipal Hospital, Beloit, Wisconsin
SCHULZE, Paula A., 720 So. Brook, Madison, Wisconsin
SCHUMACKER, Mrs. Dorothy A., 521 E. 5th St., Carroll, Iowa
SISTER MARY BARTHOLOMEW, St. Mary's Hospital, Minneapolis, Minnesota
SISTER M. BERARD, St. Mary's Hospital, Brooklyn, New York
SISTER M. BILHILDIS, Good Samaritan Hospital, Kearney, Nebraska
SISTER MARY CELINE, St. Joseph's Hospital, Mitchell, South Dakota
SISTER MARY EMELIA, Loretto Hospital, New Ulm, Minnesota
SISTER M. HELEN, St. Mary's Hospital, Athens, Georgia
SISTER MARY MACARIA, St. Thomas Moore Hospital, Canon City, Colorado

SISTER M. MIRELLA, Sacred Heart Hospital, Allentown, Pennsylvania
SISTER MARY OLIVIA, St. Joseph's Hospital, Superior, Wisconsin
SISTER MARY YVONNE, St. Joseph's Hospital, Lewistown, Montana
STEFANOWSKI, Mrs. Anna J., 24890 Huron River Drive, Rockwood, Michigan
SWANSON, Agnes M., c/o Jarvi, 3229 No. Clifton Ave., Chicago, Illinois
THOMSON, Thelma L., 697 No. Scotland Ave., Albany, New York
VANDER WAL, Emma, Sioux Valley Hospital, Sioux Falls, South Dakota
WARD, Mrs. Margaret P., 235 Schrader St., San Francisco 14, California
WEINSTEIN, Mrs. Lucy F., 22 Causer St., Bishopville, South Carolina (Tennessee member)
WHALEY, Mrs. Helen C., St. Joseph's Hospital, Flint, Michigan
*YANG, Jane H., 1213 Palama St., Honolulu, Hawaii
YOUNG, Mrs. Harriett S., 56 Wilder Ave., Hoosick Falls, New York
ZIEREIS, Monica M., Mercy Hospital, Chicago, Illinois

*Has not paid dues, not a member of the Association

Successful Candidates in Second Examination—November 19, 1945

ADEN, Mary L., 15735 Tracey, Detroit 27, Michigan
ANDERSEN, Julia K., 804 33rd St., Omaha 3, Nebraska
ANGUS, Anita J., 416 So. Kingshighway, St. Louis 10, Missouri
ARBOGAST, Madge, The Royster Nurses Home, Norfolk 7, Virginia
ASSON, Elma L., Tacoma General Hospital, Tacoma, Washington
BAILEY, Linda V., 889 Monroe Ave., Memphis 3, Tennessee
BALLARD, Mrs. Mabel S., 50 Goldengate, San Francisco 2, California
BARRON, Kathryn P., Conemaugh Valley Memorial Hospital, Johnstown, Pa.
BERTRAM, Pearl B., Silver Cross Hospital, Joliet, Illinois
BINKO, Maradell E., 1018—9th Ave., Seattle 4, Washington
BLANTON, Laura M., 212—21st St. South, Nampa, Idaho
BONACCI, Ensign Lucy E., 73 Maple St., Helper, Utah
BROWN, Mrs. Helen S., 602 Orpheum Bldg., Seattle, Washington
BROWNE, Aline, 1541 Tulane, New Orleans, Louisiana
BRUCE, Rachel V., 2117 Hayes St., Nashville 5, Tennessee
BRUN, Marie V., 15735 Tracey, Detroit 27, Michigan
BUSS, Eleanor C., Jennie Edmundson Hospital, Council Bluffs, Iowa
CHIU, Mrs. Annie W., Box 748, Grand Central Annex, New York 17, New York
COGGAN, Norma J., 308 S. Kingshighway, St. Louis 10, Missouri
COSTELLO, Coletta M., St. Thomas Hospital, Akron, Ohio
†CUMMINGS, Mary J., Camargo, Oklahoma
CRULL, Doris M., 3603 Downing St., Jackson, Mississippi
CURRY, Josephine E., 1541 Tulane St., New Orleans, Louisiana
DADAY, Helen E., Sacred Heart Hospital, Allentown, Pennsylvania
DANDRIDGE, Katherine C., Meharry Medical College, Nashville, Tennessee
DANIELS, Mrs. Emily S., 1167 S. Hawthorne Road, Winston-Salem 7, North Carolina
DAWSON, June, 1701 W. 28th St., Cleveland, Ohio
DEUTSCH, Mrs. Mabelle W., 1604 Aberdeen, Muskogee, Oklahoma
DOW, Mrs. Marguerite T., 200 No. Willomet St., Dallas, Texas
DROTZ, Dorothy L., 710—7th St., S.E., Puyallup, Washington
EARLE, Mrs. Colleen T., R.F.D. No. 2, Skowhegan, Maine
EBBING, Patricia M., 15735 Tracey, Detroit 27, Michigan
EDDY, Fern A., New Haven General Hospital, New Haven, Connecticut
EKSTROM, Rosemond C., Iowa Lutheran Hospital, Des Moines 16, Iowa
EMICK, Evelyn M., 105 N. 9th, Lamar, California
FERRELL, Lt. Esther F., 1610 SCU—Station Hospital, Camp McCoy, Wisconsin
FINK, Zala C., Ball Memorial Hospital, Muncie, Indiana
FLETCHER, Alvena, Goodall-Witcher Clinic, Clifton, Texas
FREELAND, Martha L., 1835 Cherry St., Denver 7, Colorado
GARBER, Mrs. Blanche B., Deaconess Hospital, Spokane 9, Washington

GENG, Mrs. Jeanne H., 515 West Delaware Ave., Toledo 10, Ohio
GISH, Rose L., 2800 No. Commercial Ave., Portland, Oregon
GRACE, Inez, St. Joseph's Hospital, Memphis, Tennessee
GRAHAM, Mrs. Olivia F., 2812 Audubon St., New Orleans, Louisiana
GRIMMER, Mrs. Mary F., Niles, California
GROVER, Mrs. Rowena, Mercy Hospital, Oshkosh, Wisconsin
HAIN, Mrs. Mildred H., St. Elizabeth's Hospital, Dayton 8, Ohio
HALFERTY, Mrs. Elmyrta L., 512 St. Peter St., St. Paul 2, Minnesota
HAMMOND, Marguerite N., 1258 So. Michigan Ave., Chicago, Illinois
HANSEN, Inge O., Newman Hospital, Emporia 27, Kansas
HAUG, Anna L., 237 St. Nicholas Ave., Brooklyn, New York
HIGGINS, Mrs. Amy M., 1510 Vine St., Denver 6, Colorado
HINES, Florence, Miller Hospital, St. Paul, Minnesota
HOLT, Mrs. Elizabeth S., Nashville, Arkansas
HOOVER, Mary E., 5002 Alcott St., Dallas, Texas
HORD, Lt. Nellie M., Box 424, Oliver General Hospital, Augusta, Georgia
HORTON, Ruby M., Box 735, Kilgore, Texas
HOUSLEY, Lona V., 528 E. Oakhill Ave., Knoxville, Tennessee
HUTTO, Mrs. Thady B., 115 No. Broughton St., Orangeburg, South Carolina
JANSSEN, Lt. Margie M., Station Hospital, Fort Riley, Kansas (Iowa member)
JEFFORD, Mrs. Margaret R., 105 So. Ash, North Platte, Nebraska
JOHNSON, Mrs. Bertha G., 790 East and West Road, Ebenezer, New York (Pennsylvania member)
JOHNSON, Edith, 1154 So. 3rd Ave., Pocatello, Idaho
KENNY, Eleanor M., The Grace Hospital, Detroit 1, Michigan
KLOHUCHER, Mrs. Catherine M., St. Therese Hospital, Waukegan, Illinois
KOGUT, Mildred M., 310 Elm St., Canonsburg, Pennsylvania
LAMBERT, Mrs. Elizabeth G., Missouri Pacific Hospital, St. Louis, Missouri
LEE, Margaret I., Allegheny General Hospital, Pittsburgh, Pennsylvania
LEHR, Mrs. Helen O., 1811 Adams Ave., San Diego, California
LEIGHTON, Mrs. Betty A., St. Mary's Hospital, Detroit 26, Michigan
LEVERETT, Frances E., 5436 Richards, Dallas, Texas
*LINCECUM, Verlon L., Sutter Hospital, Sacramento, California
†LINDEMUTH, Mrs. Betty S., General Delivery, Anchorage, Alaska
LITTLE, Bernadine M., John Gaston Hospital, Memphis 3, Tennessee
LUEBBING, Beatrice A., 4258 Homelawn Ave., Cincinnati 11, Ohio
LUKOWSKI, Mrs. Anna Priestley, 230 Cunningham St., St. Albans, West Virginia
LYBECK, Cora B., 646 S. E. 60th Ave., Portland 15, Oregon
MASTERS, Josephine N., 508 No. Broadway, Baltimore 5, Maryland
McLANAHAN, Naomi E., Columbus Hospital, Pittsburgh, Pennsylvania
MERRITT, Helen C., 1804—24th St., Snyder, Texas
MOODY, Pamelia J., 234 No. Tyndall, Tucson, Arizona
MOORE, Thelma I., 6001 So. Green St., Chicago 21, Illinois
MUGGLI, Lorraine M., Holy Rosary Hospital, Miles City, Montana
MURPHY, Louise C., Shackelford Hospital, Martinsville, Virginia
NICKEL, Mrs. Josephine Amato, 134 S. Ardmore, Dayton 7, Ohio
NOLTE, Mrs. Mary M., 7443 South Park Ave., Tacoma, Washington
NORDEEN, Evelyn C., Peter Bent Brigham Hospital, Boston, Massachusetts
O'BRIEN, Mary E., Medical College of Virginia, Richmond, Virginia
O'BRIEN, Sarah A., 911 Brooklyn Ave., Brooklyn 3, New York
OLDROYD, Arda, Venice, Utah
PACE, Katie, 2200 College St., Fort Worth, Texas
PARKER, Lt. Ruth M., Regional Hospital, Fort Knox, Kentucky (Indiana member)
PEARCE, Mrs. Marjorie S., City Hospital, Cleveland 9, Ohio
PEPPLER, Dorothy, 1200 E. Marshall St., Richmond, Virginia
PICKERING, Ruth A., 5002 Alcott St., Dallas, Texas
PINSON, Mrs. Genevieve M., Box 1931, Greenville, South Carolina
PIPPIN, Vivian, Clovis Memorial Hospital, Clovis, New Mexico
PLATT, Lucille M., Good Samaritan Hospital, Cincinnati, Ohio
POSTOVIT, Nellie L., F. D. Roosevelt Hospital, Bremerton, Washington
PRICE, Shirley M., 1252 Linden Ave., Memphis 4, Tennessee

QUALEY, Mrs. Bernice R., 4901 Painter St., New Orleans, Louisiana
RIEDLINGER, Ruby J., University of Virginia Hospital, Charlottesville, Virginia
ROSE, Margaret M., 416 So. Kingshighway, St. Louis 10, Missouri
RUSSEN, Leona M., Butler County Memorial Hospital, Butler, Pennsylvania
SAX, Bertha, St. Joseph's Hospital, Memphis, Tennessee
SCHMIDT, Dorothy M., Jewish Hospital, St. Louis 10, Missouri
SCHULTZ, Agnes M., St. Elizabeth Hospital, Appleton, Wisconsin
SINGLETARY, Hilda, Emory University Hospital, Emory University, Georgia
SISTER BASILLA, St. Elizabeth's Hospital, Belleville, Illinois
SISTER FLORETTA, St. Clara's Hospital, Lincoln, Illinois
SISTER GERHARDA, Holy Cross Hospital, Austin 22, Texas
SISTER GRACYANNA, St. Francis Hospital, Peoria 4, Illinois
SISTER ITA, St. Margaret's Hospital, Spring Valley, Illinois
SISTER M. ADOLPHINE, St. Francis Hospital, Osceola, Nebraska
SISTER M. ALMIRA, St. Mary of Nazareth Hospital, Chicago 22, Illinois
SISTER M. CELESTE, Mercy Hospital, Council Bluffs, Iowa
SISTER M. CHARLES, St. Joseph's Hospital, Mitchell, South Dakota
SISTER M. MATILDA, Holy Rosary Hospital, Miles City, Montana
SISTER M. SEBASTIAN, St. Catherine's Hospital, Kenosha, Wisconsin
SMITH, Vivian L., 1812 N. W. 24th Court, Miami, Florida
SNIDER, Mary B., 883 Union Avenue, Apt. 1, Memphis, Tennessee
SPOELMAN, Anne W., 137 So. Isabella, Muskegon, Michigan
STANSFIELD, Lillian M., North Carolina Baptist Hospitals, Winston-Salem, North Carolina
SURRY, Zola M., 1303—9th Ave., Seattle, Washington
THOMSON, Marjorie W., 33 W. Charlotte, Ecorse, Michingan
TUOR, Agnes J., 1575 Tracey, Detroit 27, Michigan
ULRICH, Esther I., West Nebraska Methodist Hospital, Scottsbluff, Nebraska
VANDEL, Irene E., 390 Mound Blvd., St. Paul 6, Minnesota
VAN DYKE, Lt. Margaret, Nurses Quarters, Fort McPherson, Georgia
VERCUSKY, Frances E., Episcopal Hospital, Philadelphia 25, Pennsylvania
VOLEK, Marion E., 3488 Bainbridge Road, Cleveland Heights 18, Ohio
WAGNER, Luella M., 3740 John R. St., Detroit 1, Michigan
WALKER, Mrs. Ruth H., Box 140, Bakersfield, California
WALLACE, Kathleen M., 1101—17th Ave., Seattle 22, Washington
WEAVER, Mrs. Mildred R., 1117 So. 11th St., Gadsden, Aalabama
WEDEL, Ruth R., Nurses Home, 95th and California, Chicago 42, Illinois
WEISS, Esther L., Scott & White Hospital, Temple, Texas
WHALEY, Anne L., 1032½ No. 28th St., Billings, Montana
WHARTON, Marianne, Box 209, McAllen, Texas
WILLIAMS, Mary E., 3411 Swiss Ave., Dallas, Texas
WILLOUGHBY, Pearl, Illinois Central Hospital, Paducah, Kentucky
WOLFSBERGER, Eugenia L., 8 Fox Meadows, Tappington 23, Missouri

†Inactive members
*Have not paid dues, not members of Association

INACTIVE APPLICATIONS

Inactive members are reminded that application for inactive membership must be renewed annually. Current inactive members will be mailed application forms August 1. These should be completed and returned to the Executive Office not later than January 1, 1947.

Active members, wishing to become inactive members, may secure the necessary application form from the Executive Office. New applications for inactive membership should be filed on or before January 1, 1947.

NOTES FROM THE EXECUTIVE OFFICE

THE COUNCIL

Since there has not been a meeting of the Council since 1944, and, since the business of the national and state associations has grown in scope since that time, it is important that as many as possible attend the Council meeting this year which will be held October 1, at 4:00 P.M., at Philadelphia during the annual convention of A.A.N.A.

State officers are urged to be present and present their problems for discussion. An attempt will be made to draw up uniform procedures for all states, so that new officers may know the duties of their offices. Past officers are urged to attend. Since they know the problems with which officers are confronted and how to meet them, their experiences will be of help to new officers.

According to the by-laws, the purpose of the Council shall be, "to afford an opportunity to those who are responsible for administering the affairs of the Association and the affiliated state associations to come together to report on activities, to discuss organizational and functional problems, and to promote the interests of the Association."

Members of standing committees of the Association and of standing committees of the affiliated state associations are members of the Council and are urged to attend.

SPECIAL MEETINGS

Special groups, such as alumnae associations, desiring meetings at the time of the AANA convention in Philadelphia, should notify Hilda Salomon, Jewish Hospital, Philadelphia, Pennsylvania, so that arrangement for rooms may be made. Give approximate size of group expected and the nature of meeting planned. Announcements of special meetings can be made at the convention.

APPROVAL UNDER G. I. BILL OF RIGHTS

The following schools have been added to the list approved under the G. I. Bill of Rights. For previous listing, see May 1946 JOURNAL.

ST. JOSEPH'S HOSPITAL, Joliet, Illinois

CHARITY HOSPITAL, New Orleans, Louisiana

MAINE GENERAL HOSPITAL, Portland, Maine

ST. JOHN'S HOSPITAL, Springfield, Illinois

ST. MARY'S HOSPITAL, Duluth, Minnesota

KINGS COUNTY HOSPITAL, Brooklyn, New York

SACRED HEART HOSPITAL, Allentown, Pennsylvania

CIVIL SERVICE POSITION

The Wayne County Civil Service Commission is announcing an examination for anesthetists. The positions are at the Wayne County General Hospital and Infirmary, located just outside Detroit. The salaries are $2910 to $3270 for a 40-hour week, with time-and-a-half for overtime, and an additional sum for any "stand-by" service rendered.

Citizenship, eligibility for registration as a nurse in Michigan, and completion of an approved graduate course in anesthesia are the qualifications. Interested parties are asked to write to the Wayne County Civil Service Commission, 2200 Barlum Tower, Detroit 26, Michigan, for detailed information and an application blank. The last date for filing applications is August 30th.

Revisions Proposed In A.A.N.A. By-Laws

Please study the existing BY-LAWS and REVISIONS, which will be voted upon at the business meeting of A.A.N.A., in Philadelphia.

PRESENT BY-LAWS	PROPOSED REVISIONS
ARTICLE I **MEMBERSHIP**	
Section 3. **Eligibility requirements for an Active Member**	
B. Special training in Anesthesiology (Applicant shall fulfill one of the three following requirements):	
1. Graduation from a school of anesthesiology giving an organized course of not less than six months' duration and otherwise meeting the standards of the Association.	1. Graduation from a school of anesthesiology giving an organized course of not less than eight months' duration (effective September 1, 1947) and otherwise meeting the standards of the Association.
ARTICLE IV **GOVERNING BODIES**	
Section 1. Board of Trustees	
B. Election of Trustees The election of Trustees shall take place at the Annual Meeting. With the exception of the President, First Vice-President and Second Vice-President, the members of the Board of Trustees shall be elected to serve as follows: one (1) member for a term of one (1) year and the remaining members for terms of two (2) years. In 1944 two (2) members shall be elected for terms of two (2) years and two (2) members shall be elected for terms of three (3) years and thereafter as specified in this Article and Section.	B. Election of Trustees The members of the Board of Trustees shall be elected to serve as follows: Three members elected each year for a two (2) year term and may be eligible for a second term.
Section 2. **Executive Committee** A. How Constituted There shall be an Executive Committee consisting of the President, the First Vice-President and two other members of the Board of Trustees appointed by the Board of Trustees at the Annual Meeting. The President shall serve as Chairman.	Section 2. **Planning Committee** A. There shall be a Planning Committee consisting of the President, Executive Secretary (ex-officio), Treasurer and two (2) members appointed by the Board. This shall be a standing committee, the Chairman to be appointed by the committee. The duties shall be to act as an advisory committee to the Board of Trustees.
ARTICLE VIII **COMMITTEES**	
Section 1. **Classification and General Regulations**	
. . . . All committees except the Committee on Nominations and the Committee on Examinations shall be appointed by the President subject to the approval of the Board of Trustees.	. . . . All committees, except the Nominating Committee, which shall be elected; and the Examination Committee, which is appointed by the Board of Trustees; shall be appointed

PRESENT BY-LAWS	PROPOSED REVISIONS
	by the President. The Board of Trustees may, upon written notice to the Chairman, request the removal of any committee member whose services are deemed unsatisfactory to the Board of Trustees.
Section 8. **Committee on Finance** The Committee on Finance shall be composed of the Treasurer and at least two other members and shall be responsible for long range planning of the financial structure of the Association and for the preparation of the annual budget. The Chairman shall be chosen by the Board of Trustees.	The Committee on Finance shall be composed of the President, Treasurer, and Executive Secretary (ex-officio), and one other member appointed by the Board.
Section 9. **Committee on Nominations** The Committee on Nominations shall be composed of five members appointed by the Board of Trustees. This Committee shall prepare a ballot for each Annual Meeting, consisting of the names of one or more members for each office, who are qualified to hold office and who have consented to serve, if elected to the office for which they have been nominated. On or before each January 1 preceding the Annual Meeting, the Committee shall issue to each affiliated state association a form on which the state association shall submit the name of one nominee for each office to be filled. This form shall be signed by the president or the secretary of the state association and be returned to the Committee by May 1 preceding the Annual meeting. On May 1 of each year the Committee shall prepare the ballot from the list of names submitted, or if the nominees whose names are so listed do not meet the necessary qualifications, the Committee shall have power to substitute names of nominees with proper qualification. The final draft of the ballot shall be sent to the Board of Trustees through the Chairman not later than May 15 of each year, and such draft, after study, shall be returned by the Chairman of the Board to the Chairman of the Committee. The Committee shall then contact these members for their consent to serve if elected.	The Committee on Nominations shall be composed of five (5) members elected by the membership. This Committee shall prepare a ballot for each Annual Meeting, consisting of the names of one or more members for each office, who are qualified to hold office and who have consented to serve, if elected to the office for which they have been nominated. A notice shall be printed in the February JOURNAL requesting suggestions for nominees for officers. Eligible members shall be contacted for consent to serve before being placed on the ballot. A complete ballot shall be presented to the Board.
ARTICLE XII **NOMINATIONS AND ELECTIONS** Section 1. **Elections** Elections shall be by ballot. A majority vote is necessary to elect.	Election shall be by ballot sent by mail to the membership.

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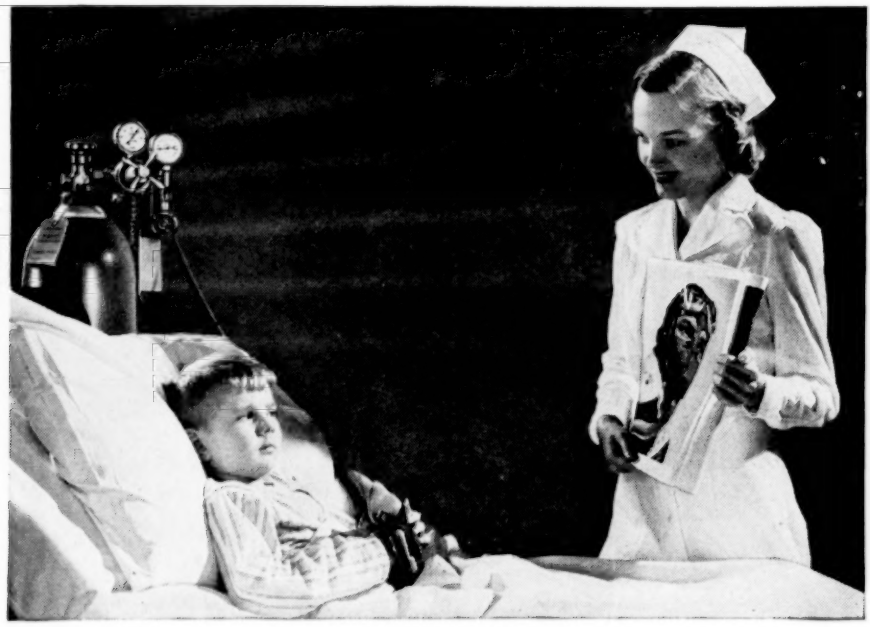

The Importance Of Confidence

• Reassuring the patient and gaining his confidence when oxygen is to be administered has an important bearing on the effectiveness of the treatment.

The physician's explanation of why oxygen is being prescribed and what beneficial effects it will have goes far toward gaining the patient's confidence and calming any fears he or members of his family may have.

But this confidence must be maintained. Therefore it is important for the nurse—by showing that she is thoroughly familiar with handling the apparatus and with the treatment in general — to continue to inspire this confidence.

Send for the 55-page "Oxygen Therapy Handbook," which describes mechanical technique and apparatus in detail. It will be sent without charge.

LINDE OXYGEN U.S.P.

OXYGEN THERAPY DEPARTMENT

THE LINDE AIR PRODUCTS COMPANY

Unit of Union Carbide and Carbon Corporation

30 E. 42nd St., New York 17, N. Y. UCC Offices in Other Principal Cities

In Canada: Dominion Oxygen Company, Limited, Toronto

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